UNIVERSITY COLLEGE LONDON

FACILITY MANAGEMENT IN THAILAND HEALTHCARE SECTOR

The study of facility directorate configuration in Thailand's healthcare organization

By

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ABSTRACT

This study aims to explore the current FM practice in Thailand's healthcare facility in order to be the base knowledge for further useful studies involving FM in Thailand healthcare sector, such as the research to improve FM potential and contribution to hospitals. The study approach is to study the organization configuration of FM directorate and synthesizes the result to explain the current FM practice.

Acknowledgement

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Chapter 1
Introduction

1.1 Background of the study

In Thailand, the term and concept of Facility management, also called FM, was first introduced and practiced in the office sector, most likely the international office[1]. This was approximately a decade ago. Since then, the FM profession gradually develops and it becomes widely accepted and practiced in other types of organizations such as department store, bank, university, et cetera. Among these, hospital is one of them.

In recent years, there are several crucial incidents happened in the healthcare sector, which requires the hospital to continually improve itself in order to handle the situation and able to provide the qualified services to patients, for example, the recent epidemic outbreak in Asia –bird flu and SARS-, the introduction of new health policy for the low income population causing the flood of patient in several hospitals, and the continually increasing demand for healthcare service that keeps growing since 90s[2]. Moreover, in private sector, the hospital, besides handling those incidents, also has to put on the best effort to survive the business in the today high-competitive era.

To assist the hospital in this situation, improving the quality and potential of facility management can be one of the key elements since the physical resource – facility- has a critical impact to this type of organization as Price demonstrates in his generic facility classification model. [3] His model shows that, in hospital, the physical environment intrinsically relates to customer's satisfaction and that the hospital is the high and complex technology facility, of which the support service cannot afford any errors.

To make any improvements in facility management for helping the hospital dealing with the situation, the subject of FM practice in hospitals should be better

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[1] Chotipanich, S. The emerging trends of facility management in Thailand (1997 dissertation)

[2] Thailand Ministry of Public Health report. Note that there is the exception in the trend during the economics recession in 1998.

[3] Price, I. (2004) 'Business critical', Facilities, vol.22, no.13/14

understood. Otherwise, any suggestions or plans may prove to be pointless and not practical in reality. Therefore, **this dissertation sets the aim to explore the current FM practice in Thailand's healthcare organization**. To achieve this purpose, the dissertation applies the approach of studying the organization configuration of FM directorate because the organization configuration provides the fundamental information that reflects on the current FM practice in most basic facets, for instance, its role and responsibility, its focus whether on strategic level or operational level, et cetera.

1.2 The study purpose and structure

This study's primary purpose is to explore the current FM practice in Thailand healthcare organization via studying the organization configuration of FM directorate in the healthcare organization. The key question is then: **What is the organization configuration of FM directorate in Thailand healthcare organization?**

To answer this key question, the study establishes 4 stages process in finishing this dissertation:

1. Review the related literature
2. Establish the study hypothesis
3. Conduct the case investigation and interview
4. Analyze the acquired information

1.3 The study methodology

As can be seen in the study structure, this study methodology is composed of three methods: literature review, case study, and structured interview.

- Literature review: In this method, all literature concerning the organization configuration theory and the medical management books including those relating to FM organization concept will be reviewed. The result of this method will provide the basic understanding of FM directorate organization configuration allowing the study to establish the study hypothesis.
- Case study and structured interview: Those methods have been selected for data gathering. The reason and detail of both methods will be further explained in chapter 3.

1.4 The term used in this dissertation

Before entering to the study, it should be useful to note that certain words have the same meaning and are used interchangeably in this dissertation. These are:

FM	: Facility management
Facility directorate	: FM directorate, Facility management directorate, Facilities directorate, Facilities management directorate
Facility manager	: FM manager, facility management manager, facilities manager
Facility staff	: FM staff, facility management staff, facilities staff
Facility function	: FM function, facility management function, facilities function
Healthcare organization	: Healthcare facility, hospital (healthcare organization in this paper refers to a hospital.)
Parent organization	: Corporate centre

Having introduced the topic of this dissertation and the context of the study, the next chapter will begin with explaining the summary of reviewing related literature and then establishing the study hypothesis including the analysis framework.

Chapter 2

Literature review & Study hypothesis and framework

2.1 Aims and overview

This chapter aims to provide the basic understanding of the topic by reviewing the theory relating to the organization configuration and finally to establish the hypothesis and the framework of this study. This chapter will be divided into three parts: the organization configuration theory, the example cases from literature, and the establishment of hypothesis and analysis framework of this study. The first part begins with the well-known organization configuration theory provided by Mintzberg. In this part, the study focuses on the two types of Mintzberg configuration that relates to the topic. The study, then it demonstrates other configuration theories and concepts that directly relate to the facility directorate including the concept of facility management in Thailand. The second part provides certain examples of the facility organization configuration in the healthcare sector that are found in the literature review. Lastly, the hypothesis and analysis framework of this study, based on the information from literatures, will be created and described at the end of the chapter.

2.2 Organization configuration theory

2.2.1 Organization configuration. (Mintzberg, 1989)

Since 1989 Mintzberg introduced the organization configuration theory in his book, *Mintzberg on management*. In order to understand the organization better, the theory considers organization in the holistic point of view by looking at all the concerned attributes, instead of focusing on any particular one which had been the popular way to study organization previous to now. In his theory, Mintzberg explains that the organization is consisted of three parts: the people and organization parts, the mechanism, in which the organization operates, and the context that influences the organization. Based on these attributes, he then has derived seven organization configuration and these are Entrepreneurial organization, Machine organization, Professional organization, Diversified organization, Innovative organization, Missionary organization, and Political organization. Figure 2.1 demonstrates these seven configurations and their attributes.

Configuration	*Prime Coordinating Mechanism*	*Key Part of Organization*	*Type of Decentralization*
Entrepreneurial organization	Direct supervision	Strategic apex	Vertical and horizontal centralization
Machine organization	Standardization of work processes	Technostructure	Limited horizontal decentralization
Professional organization	Standardization of skills	Operating core	Horizontal decentralization
Diversified organization	Standardization of outputs	Middle line	Limited vertical decentralization
Innovative organization	Mutual adjustment	Support staff	Selected decentralization
Missionary organization	Standardization of norms	Ideology	Decentralization
Political organization	None	None	Varies

Figure 2.1 Mintzberg's organization configuration

Professional organization

According to Mintzberg, hospital is categorized as the **professional organization**, in which the operating core is the most crucial part. In this case, the operating core refers to the medical staffs[1]. This results in the configuration having the pattern of full horizontal and vertical decentralization of power. The other essential part in this type of configuration is the support staff whose duty is to provide back up services to the professionals, while other parts such as middle managers, in other word the administrators, or the staffs who are responsible for control the standard of organization work like administrator but resides outside the hierarchy of line authority, called technostructure, has less significance due to the less influence of administrative control to the organization. In coordinating this configuration, the key mechanism is the standardization of professional knowledge and skill, which can be achieved primarily by formal training[2]. The operating core in this organization functions by the process called

[1] This theory is also used as the reference in other medical management books, such as *Management for doctors.*

[2] Mintzberg on management 1989 p.175

pigeonholing process. Mintzberg (1989) provides the description about this process as followed: *in this process the professional has two basic tasks: (1) to categorize or diagnose the client's need in terms of one of the contingencies, which indicates which standard program to apply, and (2) to apply or execute that program.* The other issue in this type of organization is the role of administrator. Although the administrator obviously lacks of power in controlling the professionals, it still possesses the significant roles and power in directing the organization. There are two key roles the administrator of this type of organization must perform well. The first role is the manager who handles the internal disturbances in the organization, cause of which is due to the pigeonholing process. The other responsibility is to serve as the boundary of the organization, between the professionals inside and the influencers outside[3].

Giving the obvious dominance of professional role in this configuration, the strategy of the organization is certainly not developed or designed by only the administrator, unlike other organization types. There are three types of strategic decision-making existed in the professional organization and these are decision made by professional judgement, decision made by administrative fiat, and decision made by collective choice. In other word, the strategies are produced by three separate groups which are the professionals, the administrator, and the collective of those two depending on the area that the strategies concern.

Nevertheless, this rule of organization configuration, i.e. the decentralization of power to the operators, does not apply to every aspect in the organization as Mintzberg also identifies in the text that, *for the support staff, there is no democracy in the professional organization, only the oligarchy of the professionals. Such support units as housekeeping in the hospital or printing in the university are likely to be managed tightly form the top, in effect as machinelike enclaves within the professional organizational configuration. Thus what frequently emerges in the professional organization are parallel and separate administrative hierarchies, one democratic and bottom-up for the professionals, a second machinelike and top-down for the support staff.*

Considering this explanation, the study then considers that the character of the machine organization should be taken into account for studying this topic. The following section explains this type of configuration.

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[3] Mintzberg on management 1989 p.180

Machine organization

Probably the most dominant configuration, the machine organization has the strong characters of emphasis on controlling, high centralization with the tall-hierarchy structure and most likely to be the large scale organization with the formal style of communication throughout the whole organization. It also has the large-size operating core consisted of routine and standardized works, character of which is designed for the purpose of cost effective. Usually the organization structure groups the work unit based on the functional basis and has the well-defined boundary between each part in the organization.

In this type of configuration, the most critical part is the technostructure. Its main function is to standardize work processes creating the whole coordination system to be used in this organization.

As for the strategic issue, the responsibility is directly assigned to the organization manager as he has all the power in directing the organization. Regarding this issue, Mintzberg provides certain interesting points that this type of configuration has problem in making strategic change and most strategies are very likely to be unchanged from the old ones, particularly those that are established from planning process. This character ultimately brings about the disaster to the organization. The main reason is that the configuration is not designed for handling the change whether in any aspect including strategy. According to Mintzberg, there are two ways to solve this situation. The first way is to return its system for a period of time back to the entrepreneurial type which is far more suitable to handle the change situation while the other way is to turn itself to the innovative configuration to initiate the new ways.

Having reviewed the organization configuration theory and known the basis of the organization configuration, the study will next review the organization theory that directly relates to the facility directorate.

2.2.2 Facility directorate organizing.

There are two theories described in this section. The first theory is provided by Cotts (1999) in his book, *The facility management handbook 2nd edition.* The other is introduced by Barret (2003) in *Facilities management towards the best practice 2nd edition.*

A. Cotts FM organization theory

Cotts explains that normally FM directorate is often arranged and developed in accordance with the parent company. Nonetheless, he emphasizes that this should not always be the case and any adaptation or changes should be welcomed since the good departmental organization can contribute in helping the directorate accomplish its aims. Figure 2.2 shows the list of the functions that belong to the facility directorate provided by Cotts. There are a number of factors that should be carefully considered in attempting to form the directorate and these are the size that the directorate should be, the location of the organization whether single or multiple sizes, the type of facility service that the organization requires, and the way that the directorate organization can yield the most effective result for the parent organization.

Figure 2.2 List of facility functions

1. Management of organization
   - Planning
   - Organizing
     - By function, organization, or buildings
     - Centralized versus user driven
   - Staffing
     - Personal management
     - Evaluation of mix staff, consultants, and contractors
     - Training
   - Directing
     - Work scheduling
     - Work coordination
     - Policy and procedure development
   - Controlling
     - Work reception
     - Standard establishment
     - Scheduling
     - Use of management information systems and basic computer literacy
     - Contract administration
     - Policy and procedure execution
   - Evaluating
     - Design
     - Punch-list preparation and execution
     - Post occupancy evalutaion
     - Program analysis
     - Contract administration
     - Contractor analysis

2. Facilities planning and forecasting
   - Five-to-ten year plan
   - Three-to-five year plan
   - Eighteen-month to three-year plan
   - Space forecasting (macrolevel)
   - Macro level programming
   - Financial forecasting and macro level estimating
   - Capital program development

3. Lease administration
   - Out leasing as owner
   - Lease administration
   - Property management

4. Space planning, allocation, and management
   - Space allocation
   - Space inventory
   - Space forecasting
   - Space management

5. Architectural/Engineering Planning and design
   - Macro level programming
   - Building planning
   - Architectural design
   - Engineering design of major system
   - Macro level estimating
   - "As-built" maintenance
   - Disaster-recovery planning
   - Design documents
   - Code compliance
   - Traffic engineering
   - Zoning compliance

6. Workplace planning, allocation and management
   - Workplace planning
   - Workplace design
   - Furniture specification
   - Equipment specification
   - Furnishing specification
   - Estimating
   - "As-built" maintenance
   - Code compliance
   - Art program management

7. Budgeting, Accounting, and Economic justification
   - Programming
   - Work plan preparation
   - Types of budget
     - Administrative
     - Capital
     - Operations and maintenance
     - Chargeback
   - Economic justifications
   - Financial forecasting
   - Budget formulation
   - Budget execution

8. Real estate acquisition and disposal
   - Site selection and acquisition
   - Building purchase
   - Building lease
   - Real estate disposal

9. Construction project management
   - Project management
   - Construction management
   - Procurement management
   - Procurement
   - Preparation of "as-built"

Figure 2.2 List of facility functions (continued)

10. Alteration, Renovation, and Workplace installation
    - Alteration management
    - Renovation management
    - Furniture installation
    - Datacom installation
    - Voice installation
    - Provision of furnishings
    - Equipping
    - Relocation moving
    - Procurement
    - Preparation of "as-built"
    - Project management

11. Operations, maintenance, and repair
    - Exterior maintenance
    - Preventive maintenance
    - Breakdown maintenance
    - Cyclic maintenance
    - Grounds maintenance
    - Road maintenance
    - Custodial maintenance
    - Pest and rodent control
    - Trash removal
    - Hazardous waste management
    - Energy management
    - Inventory
    - Maintenance project
    - Repair projects
    - Correction of hazards
    - Disaster recovery
    - Procurement

12. Telecommunications, Datacommunications, Wire and Network management
    - Operations
    - Maintenance
    - Central voice operations
    - Data system reconfiguration

13. Space planning, allocation, and management
    - Space allocation
    - Space inventory
    - Space forecasting
    - Space management
    - Network management
    - "As-built" maintenance

14. Security and life-safety management
    - Code compliance
    - Operations
    - Criminal investigation

15. General administrative services
    - Food services
    - Reprographics
    - Mail and messenger management
    - Transportation and vehicle maintenance
    - Property disposal
    - Moving services
    - Procurement
    - Health and fitness program management
    - Day care center management

Moreover, Cotts also provides the common errors that are found in organizing the facility directorate, applying the project management style in the directorate without careful consideration, lack of organizational element for the work of integration and coordinating, mixing planning and design functions with the operations, for instance. The other observation, suggested by Cotts, is that the facility function can be both staff and line function likely to depend on the size of the parent organization. Relying on his experience, he has summed up certain forms of facility directorate organization that he considers are sufficient models. Note that the model is set in the level of the corporate headquarters and the directory is presented as an institutionally funded, primarily centralized business function[4]. There are five of them as listed below:

- Office manager model

[4] The facility management handbook, p.25

- One-location, one-site model
- One-location, multiple-sites model
- Multiple-locations, strong regional, or divisional-headquarters model

Fully international model

Office manager model

This model is suitable for the organization that does not have its own building and has the facility directorate as the staff function because the organization cannot afford human resource to execute facility work. However it is noted that a few functions should be performed by the company own staffs and these are management of organization, lease administration, budgeting, accounting, and economics justification, and procurement. Most functions are controlled by contracts. Figure 2.3 shows this model diagram.

One-location, one-site model

This model is designed for the relatively large-size organization which owns the building or buildings located on one site. Here the facility directorate becomes line function and the facility manager becomes line manager not merely the consultant. The model, as can be seen in Figure 2.4, has the full-service facility directorate and most of them are provided by in-house staff, while the contract-out service is frequently applied for the special work or for handling the peak loads of work. However, note that in practice there is a possibility that certain functions will be outsourced depending on the parent organization policy. According to Cotts, this model shows the following principles:

1. Presence of an organizational unit to coordinate and integrate work
2. Management for both ongoing work and project work
3. Integration of communications
4. Adequate engineering
5. Balance between planning and design and operations and maintenance

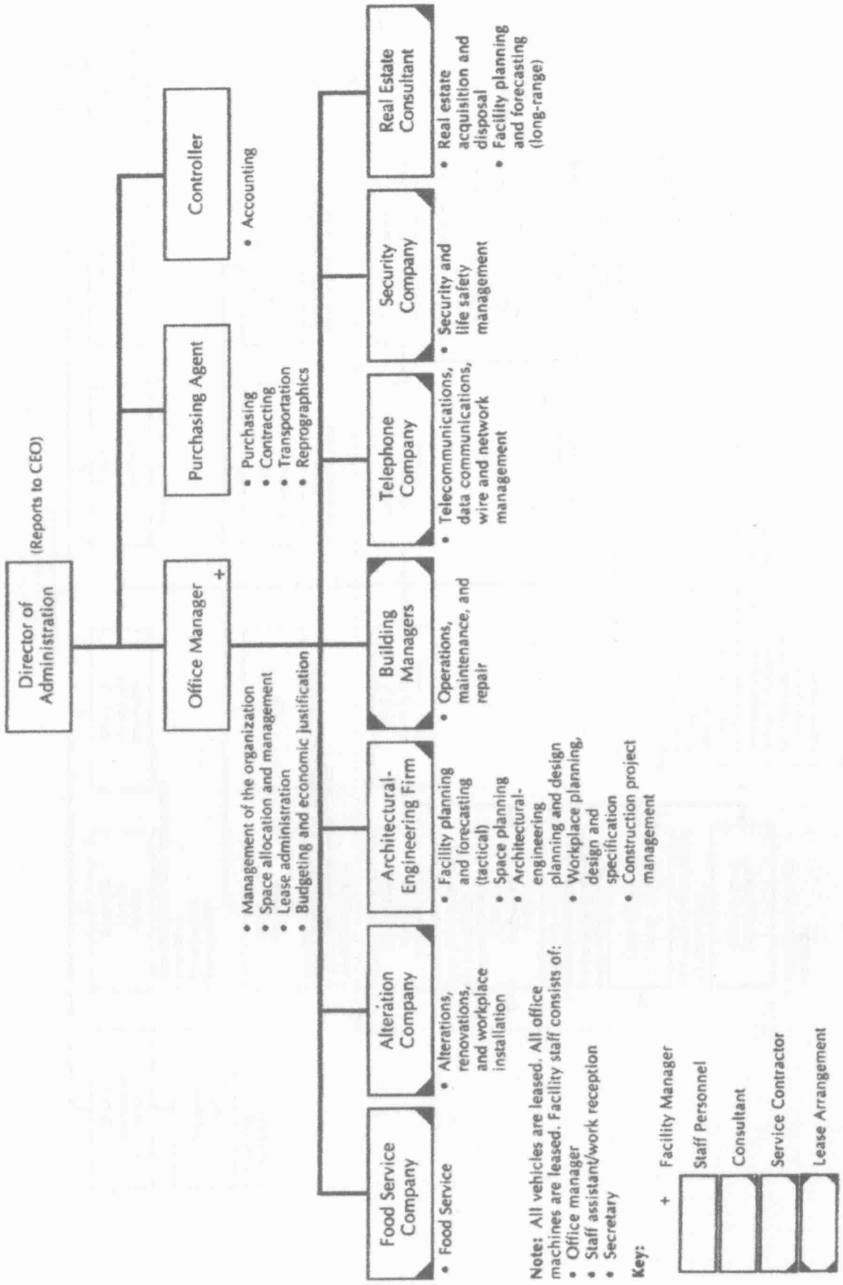

Figure 2.3 Office manager model

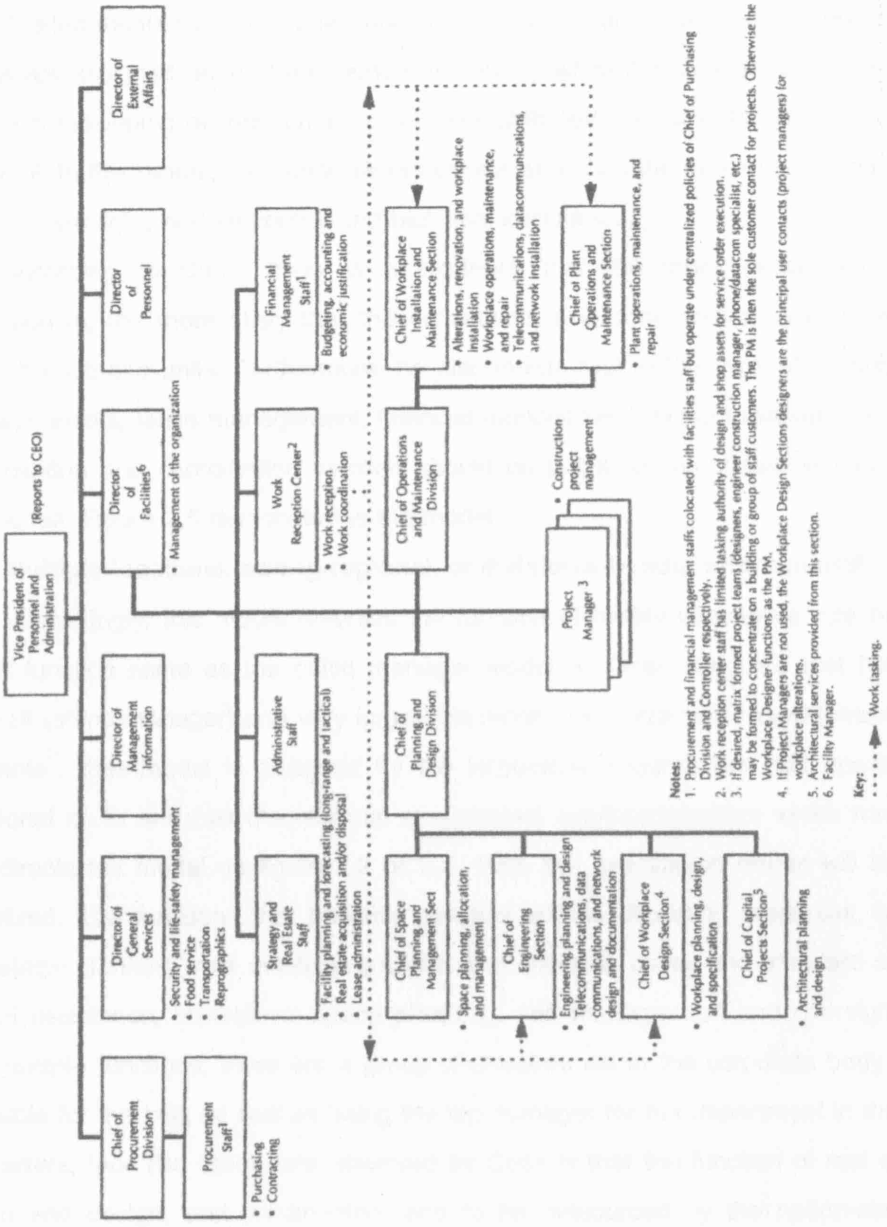

Figure 2.4 One-location, one-site model

One-location, multiple-sites model

The organization that fits this model is the one that has headquarter with the other sub-sites located in the same country or metropolitan area. The key operational functions are assigned under the headquarter control, while the general facility services, such as housekeeping or maintenance, can be distributed and executed by the sub-site unit control. In this model, the headquarters organization has the major task of providing the policy, oversight, budget control and technical assistance.

According to Cotts, there is a tendency that the more decentralized the organization is, the more likely that the consultants and contract-out services will be used in the sub-site units. Furthermore, he also insists that in this type of organization the design assets, lease management, financial management, project management, and work reception and coordination function should be put more emphasis and be more strengthened. Figure 2.5 demonstrates the model.

Multiple-locations, strong-regional, or divisional-headquarters model

Interestingly, this model reverses the function of facility directorate role back to the staff function same as the office manager model as Cotts suggests that both the very small (office manager) and very large (this model) organizations rely extensively on consultants[5]. This model is designed for the large-scale organization that operates in the national scale and has the regional or divisional sub-headquarters which have the facility directorate model as figure 2.2 or 2.3. Here the operational issues will be less emphasized. The functions that become principle will be allocating resources, tactical and strategic planning, real estate acquisition and disposal, policy and standard setting, technical assistance, macrolevel space planning, and management and oversight. For these principle functions, there are a group of directors set in the corporate body being responsible for the task as well as being the top manager for the department in the sub-headquarters, too. The other note observed by Cotts is that the function of real estate, planning and design, and construction tend to be outsourced by the nation-standard company and that the function concerning legal issue will become the daily matter for the facility director. Figure 2.6 shows the diagram.

[5] Facilities management handbook p.31

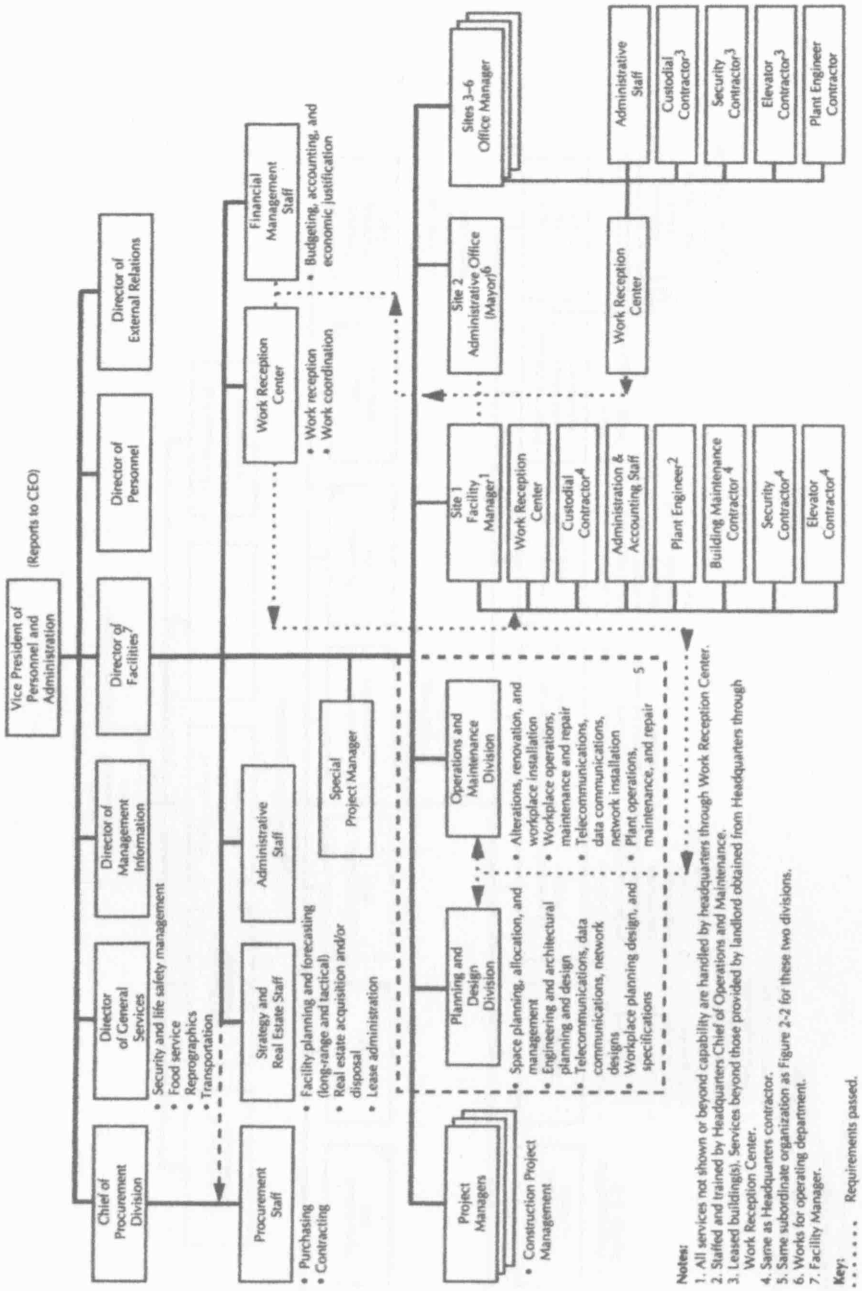

Figure 2.5 One-location, multiple-sites model

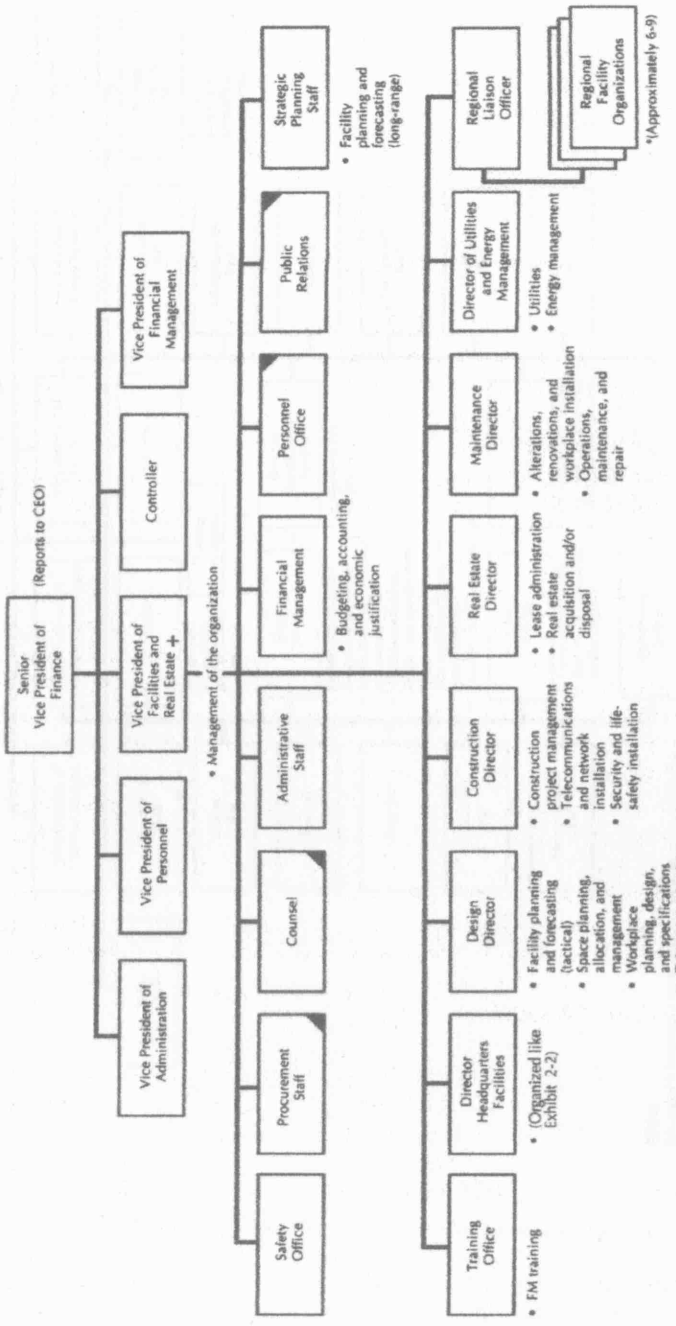
Senior Vice President of Finance
(Reports to CEO)
Vice President of Administration
Vice President of Personnel
Vice President of Facilities and Real Estate +
Controller
Vice President of Financial Management
• Management of the organization
Safety Office
Procurement Staff
Counsel
Administrative Staff
Financial Management
Personnel Office
Public Relations
Strategic Planning Staff
• Budgeting, accounting, and economic justification
• Facility planning and forecasting (long-range)
Training Office
Director Headquarters Facilities
Design Director
Construction Director
Real Estate Director
Maintenance Director
Director of Utilities and Energy Management
Regional Liaison Officer
Regional Facility Organizations
*(Approximately 6-9)
• FM training
• (Organized like Exhibit 2-2)
• Facility planning and forecasting (tactical)
• Space planning, allocation, and management
• Workplace planning, design, and specifications
• Telecommunications and network design
• Security and life-safety design
• Construction project management
• Telecommunications and network installation
• Security and life-safety installation
• Lease administration
• Real estate acquisition and/or disposal
• Alterations, renovations, and workplace installation
• Operations, maintenance, and repair
• Utilities
• Energy management
Key:
+ Facility Manager.
Could be on assignment from another vice presidency.
Could be performed in another vice presidency.

Figure 2.6 Multiple-locations, strong-regional, or divisional-headquarters model

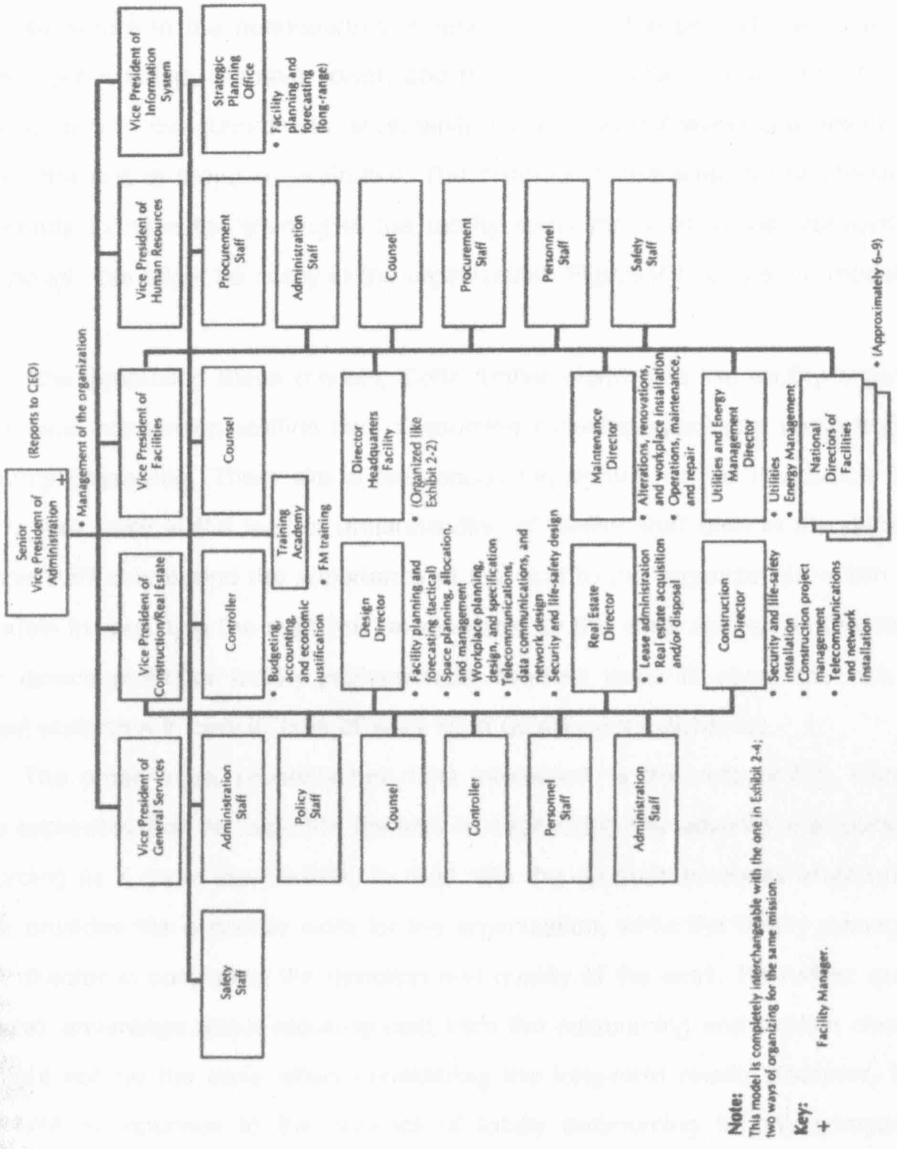

Figure 2.7 International model

Fully international model

Similar to the previous model, the facility directorate of this model has the role of staff not line function and Cotts also suggests that these two can interchangeable whether partly of totally. The main concept in this model, like the last one, is that the facility directorate in the headquarters is responsible for the principle tasks which are overseer, policymaker, problem solver, and resource allocator including the director for the facility unit in the subordinate sites, while the operational works are mainly carried away by the unit in those subordinates. The distinguish character in this model is that there needs to have the training in the facility staffs for creating the standard of the work, though this might be costly to the organization. Figure 2.7 shows the model.

After proposing these models, Cotts further elaborates the facility organization related issue concerning staffing and outsourcing including specifying some troubles in the facility organizing. There are a few issues highlighted in the discussion. One of these is that there is the lack of understanding of facility staff both in the definition of what the staff duty is and the importance of the staff to the organization, which causes the trouble in recruiting the right human resource for the work as well as the dead-end career development for facility professionals. Another issue is about the lack of the qualified workforce in certain area of work such as elevator mechanics.

The other issue, probably the most interested, is the outsourcing. Here Cotts clearly expresses that he supports the idea in capitalizing the advantage in using of the outsourcing as it gives the flexibility to deal with the dynamic business environment as well as provides the expertise work for the organization, while the facility manager acts as the director in controlling the direction and quality of the work. He further questions the cliché' advantage about reducing cost from the outsourcing and explain clearly that this might not be the case when considering the long-term result. However, he also states that he opposes to the concept of totally outsourcing to one company and provides two major reasons for his argument. The first reason is that the total package tends to be too large and over-demand, while the other is that the company that does every thing is likely to not to do well in anything. The last issue Cotts interestingly provides in the staffing topic is the information about the ratio between the number of facility staff and the staff that is served, which is roughly at 1:50 or 1:60, as well as the

ratio between the number of facility staffs and the area of the organization, shown in Figure 2.8.

Area in Gross Square Feet (gsf)	*Staff Served/FM Employee (all sources)*
Less than 100,000	27
100,000–200,000	38
200,000–500,000	47
500,000–1,000,000	59
Greater than 1,000,000	87

Figure 2.8 Typical staffing across a broad range of FM organizations

As for the problematic topics in organizing facility directorate that Cotts suggests in his book, most of them concern the trouble of not knowing that certain functions should be put in which part, for example, the real estate function, the design unit, the strategic planning function, and the project management function. These all depends on the organization culture and work context. Certain organization has the independent strategic planning unit since the organization constantly deal with the issue while the small organization does not so the small firm integrate the function to other unit.

B. Barret's FM organization related concept

In his book, *Facilities management toward best practices*, Barret states that there are typically five types of facility organization, referred from Cott's material. These are office manger, single site, localised site, multiple site, and international. Then he further provides a number of case studies, divided into those five categories, demonstrating the current practice of facility management and later summarizes the findings. Then he makes the recommendation of how an ideal facility management should operate, the context of which relates to the organization configuration in certain degrees. In explaining this ideal way of operating facility directorate, Barret divides the issues into four aspects and these are facility management structure, management of facility management services, meeting current core business needs, and facility management and external influences.

In the first aspect, Barret provides the list of functions that are likely to be included in the facility directorate as shown in Figure 2.9. Then he clearly explains that there certainly is no one best model suits to all kind of organization and provides the guideline that should be considered in establishing the facility structure. There are five

issues in this guideline: the size of the organization, the location of the organization whether one-site or multiple-site, the consideration to choose which service the organization needs to have and which one should belong to facility arena, the in-house and outsourcing issue, and the background of personal for staffing issue.

Facility planning	Building operations and maintenance
❑ Strategic space planning ❑ Set corporate planning standards and guidelines ❑ Identify user needs ❑ Furniture layouts ❑ Monitor space use ❑ Select and control use of furniture ❑ Define performance measures ❑ Computer-aided facility management (CAFM)	❑ Run and maintain plant ❑ Maintain building fabric ❑ Manage and undertake adaptation ❑ Energy management ❑ Security ❑ Voice and data communication ❑ Control operating budget ❑ Monitor performance ❑ Supervise cleaning and decoration ❑ Waste management and recycling
Real estate and building construction	**General/office services**
❑ New building design and construction management ❑ Acquisition and disposal of sites and buildings ❑ Negotiation and management of leases ❑ Advice on property investment ❑ Control of capital budgets	❑ Provide and manage support services ❑ Office purchasing (stationery and equipment) ❑ Non-building contract services (catering, travel, etc.) ❑ Reprographic services ❑ Housekeeping standards ❑ Relocation ❑ Health and Safety

Figure 2.9 Typical functions in facility directorate

Secondly in the management of facility management services, Barret insists on correcting the false focus of facility manager. He clearly states that the manager primary task is to be the co-ordinator and manager spending time to develop the strategic issue for the directorate instead of the implementer who involves in every step of facility operation and, as a result, wasting the valuable time to do the right job. Here Barret discusses that the problem is the manager's situation of information overload causing him having to deal with every kind of problems from operational to strategic. Barret suggests that to solve this type of situation the delegation in power and decision making should be set, the definition to the staff responsibility whether in-house or outsourced

should be made clear, and the information technology should be brought to aid the manager.

In the next topic, responding to the core business need, Barret expresses that FM should move its role toward more proactive in order to provide more advantages to the organization. One method helping this move is to arrange the routine meeting to help gaining the essential information from the user. The fourth issue about the external influences, Barret stresses on the importance of maintaining the update of any changes since nowadays the world, particularly the business world, becomes dynamic. The new things, knowledge, or technologies appear all the time and that can certainly have the effect on the organization if it cannot adapt itself to respond to certain related changes well enough. Here Barret introduces a few channels helping manager to keep in touch with the update. The first one is to utilize the expertise in the work unit. The second way is gaining the update through the work partners such as contractor, and other specialist professionals that constantly work with the organization. The third channel can come from the local community, which means that the manager has to create the relationship to the community that the organization is locates. Lastly, the information can be derived from certain specialist information source dedicated to facility management, for instance, professional associations, books, conferences, and collaborative research projects.

Finally Barret completes his suggestion by establishing the generic model of interaction in facility directorate showing which significant interactions should be carried out during the department operation, as displayed in Figure 2.10. In this model, the interaction can be divided into two groups: those concern strategic facility management and those relates to operational facility management. The list below shows these interactions:

Operational facility management

1. The interaction inside the facility directorate i.e. facility manager and work unit, or between each work unit.
2. The interaction between the facility directorate and the organization core on the routine basis matter.
3. The benchmarks of the organization facility against other organization's facility.

Strategic facility management

4. The interaction of facility directorate and core business about the future movement, or changes.

5. The continual attempt of facility manager to make developments to the facility management arena.
6. Interaction between operational facility management and strategic facility management to establish the policy, plan, and strategy for the future.

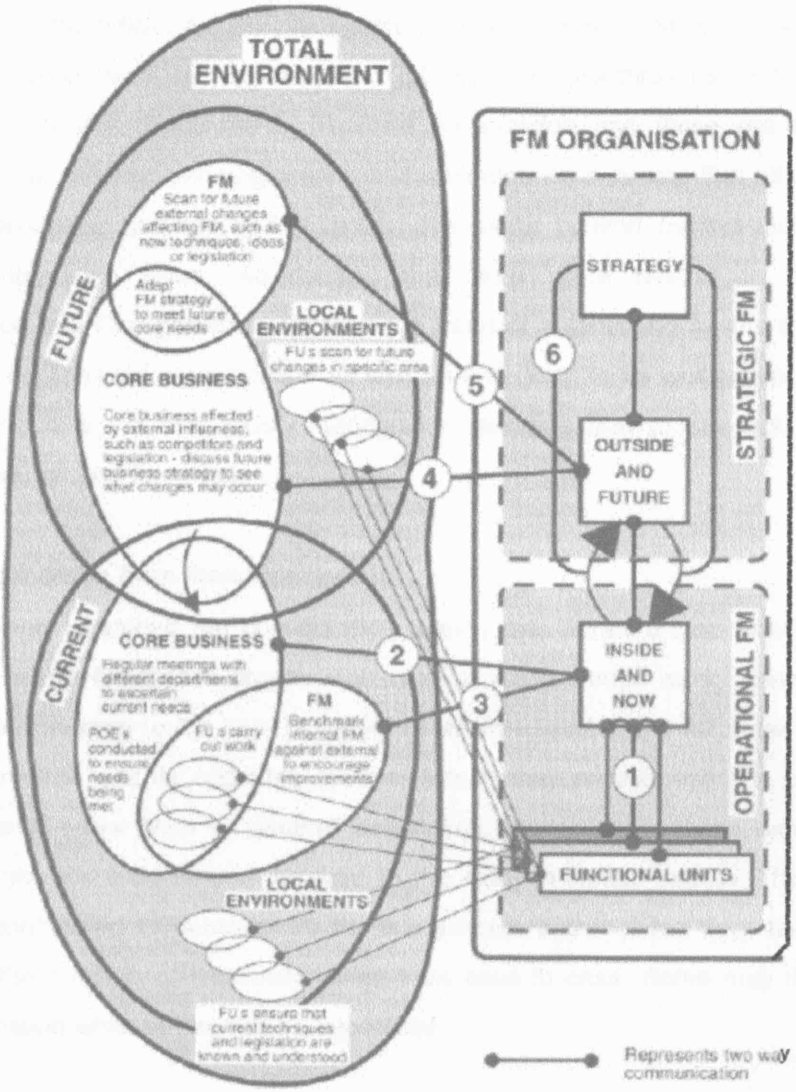

Figure 2.10 Generic interaction model

C. Facility management concept in Thailand (Chotipanich)

The concept, and indeed practice, of facilities management in Thailand can be described as relatively immature. The facility work still gains rather low priority. It is

perceived as the routine building support services and concerns mainly the works in the operational level. The integration of all the facility-related functions still absents in several organizations, particularly those in local group.

Irrefutably all these characters are also very likely to be reflected in the configuration of Thailand facility directorate as Chotipanich provides certain related information in his article, *Facility management Thailand 2002: The validity and essence of facility management*. He explains that typically there are three major function units belonged to facility directorate in Thailand organization and these are cleaning or housekeeping, security, and engineering and maintenance services. The other reflection is the over-staffed problem in the facility directorate caused by the lack of facility function integration issue. Additionally, the other issue related to organization configuration that Chotipanich refers to is the trend of outsourcing seems to be greatly welcomed by Thailand organizations as well as it is likely to be well prosperous in the future, particularly the total facility management services due to the lack of qualified human resource and know-how.

2.3 Example cases from literature review

Having described the configuration theory, the literature also provides certain examples of the healthcare organization configuration, though rarely does the given example demonstrate to the level of facility directorate level in the full detail concerning both its structure and its operating system. Mostly they provide only the organization structure and a few lines of general description. Nonetheless, these examples can irrefutably give the solid view of the topic to this study in certain degree. Therefore, this sector is contributed to demonstrate those examples accumulated from the literature. Note that the detail is considerably varied from case to case. Some may rich with in-dept information while others can be superficial.

Example 1[6]: This example demonstrates only the organization structure of a university hospital. It is used in Mintzberg book to display the concept of professional organization. Here, the flow, Figure 2.11, reflects Mintzberg description of the organization that is based on operating core and has thin middle-line manager and small technostructure part with fully elaborated support staff.

[6] Mintzberg on management

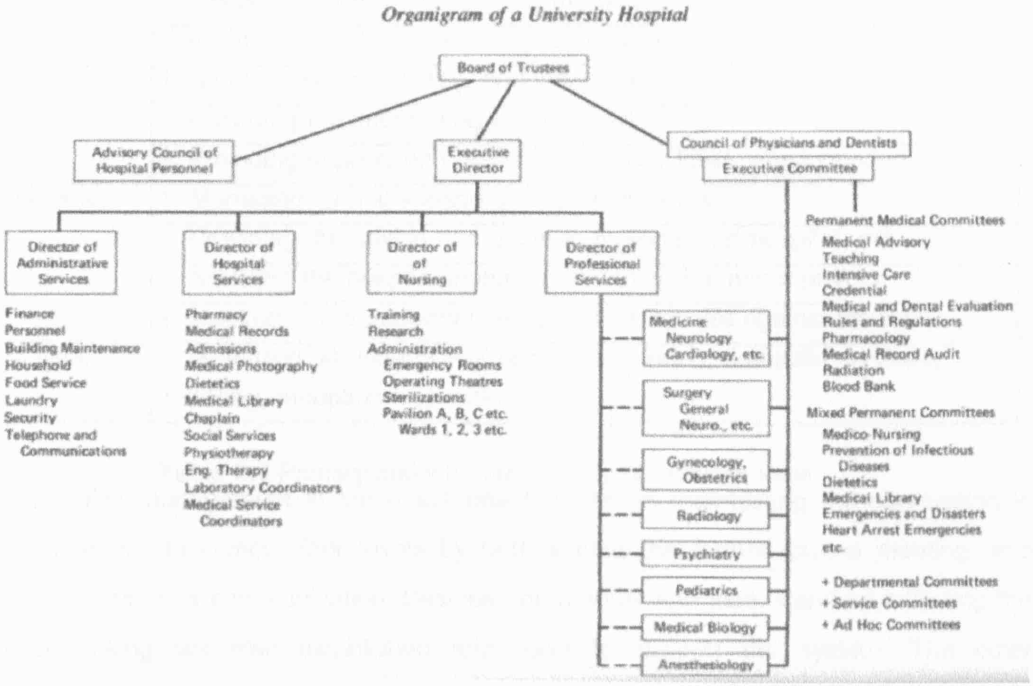

Figure 2.11 Organization diagram of university hospital

Example 2[7]: This example is the group of private healthcare organizations. This group composed of 32 hospitals divided into 4 regional groups. The facility directorate in this organization is fully developed. The structure of the directorate can be divided into 4 levels, perfectly reflecting the overall organization structure. These levels are board, corporate, regional, and individual hospital. Table 2.1 shows the primary tasks in each level.

[7] Facilities management towards best practice p.23-30

Level	Primary task
Board	1. Represent facilities function to the board
	2. Giving the advice concerning facilities resource to the board
Corporate	1. Setting objective, policy, and standard
	2. Providing the information to the board
	3. Providing support and guide to the lower level, when needed
Regional	1. Managing all maintenace and project works
	2. Providing the advice and guide to regional and hospital unit
	3. Assisting the hospital managers planning the minor project
	4. Monitoring the performances of the directorate against the fund
Hospital	1. Managing all non-medical services: catering, domestic services, portering, reception and maintenance

Table 2.1 Primary tasks in each facility directorate level

The management in the directorate focuses on maintaining the corporation in facility works throughout four levels by both setting the formal routine meeting, and using the informal communication. Besides, the manual and work standard including the benchmarking are also established and used to support the system. The other interesting point in this case is that there is the significant need to work in corporation between facility unit and others in order to aid the organization achieve the business objective. For example, the co-ordination between the marketing department and facility department in providing the information of patient requirement resulted from the survey.

Example 3[8]: The example is NHS health care trust. The new management concept is introduced in the trust making the facility functions become more important part to support the organization achieving its goal in distributing the good qualified services to the community. Generally, the facility directorate in the trust is consisted of three major departments: PFI and Interim project management, property and estate development, and hotel and estate operational. In detail, these departments contain the following functions: domestic, portering, medical electronics and maintenance, operational estates, printing services, security, catering services, car parking, patient services, reprographic services, and receipt and distribution. Among these, some are retained in-house because of its constant demand while others are outsourced. Furthermore, the new concept also causes the directorate to become more output-oriented focusing on the performance, which as a result affects the other parts in the trust to transform into this norm as well.

[8] Facilities management towards best practice p.35-39

2.4 Study hypothesis and analysis framework

2.4.1 Study hypothesis

Giving the related information found in literature reviews, several variables affect the organization configuration of facility directorate. Among these, four variables are critical and they are:

- Location – single or multiple sites
- Size of organization
- Type of organization, and
- Culture – in this case, it means Thailand culture and norm.

However, there is one character that all theories including examples share the similarity regardless of those four variables. This character is that the facility directorate has the character of machine organization, such as functional structure, the over-workload problem that occurs to the facility manager, and formal communication.

Based on this observation, the study then establishes these hypotheses as followed:

1) ***The organization configuration of facility directorate in Thailand's healthcare organization has the typical character of the machine organization.***

2) The organization configuration of facility directorate in Thailand's healthcare organization is building service based.

3) The outsourcing is dominant in the organization configuration of facility directorate in Thailand's healthcare organization.

Furthermore, since those four variables affect the configuration, it is then controlled in order to make the study result more accurate. This control will be seen in the case selection criteria in that the size, the type, the location, and the place are set to be similar.

2.4.2 The analysis framework

A. The study analysis framework

In answering the hypothesis and achieving the main objective in exploring the configuration of facility directorate, two stages of analysis are established for the study: the organization analysis, and the result analysis.

In the first stage, the analysis focuses on investigating each case study in detail regarding the configuration of facility directorate and then summarizes the result. The framework used in case investigation and analysis will be explained later by the end of this section. In the second stage, the summarized result will be further analyzed in order to validate the hypothesis, depict the future trend of FM organization configuration, illustrate the current practice of FM in hospitals, and finally suggest any possible improvements that can be done.

B. The organization configuration investigation and analysis framework

Based on the literature review, obviously the organization configuration is composed of various aspects, for instance organization structure and its components, the system mechanism that it uses to operate the department, the staffing issues, and the outsourcing topic. The explanation about it can also be done in numerous alternatives.

In order to systematically gather information and analyze it creating the result and conclusion for completing the aims of this study, therefore, the suitable framework has been chosen, and it is the model proposed by Johnson and Scholes since it contains all related details, orderly arranged and categorized. In this framework, the organization configuration is consisted of three aspects: **organization structure, the organizational process, and the relationship**.

1. Organization structure

The organization structure shows the units inside the department and the line of authority identifying which type the structure is. There are various types of structure: simple, functional, multidivisional, matrix, and team based, for instance. Additionally, the study has included the data regarding manpower into this topic expecting to find out more useful details.

2. Organization process

The organizational process is the system the directorate operates –how to control the operation in the directorate. For example, the processes are direct supervision, control and planning system, performance targets, market mechanism, social and culture norms, and self regulation.

3. Relationship

Finally the relationship aspect looks into both internal and external relationships. In this study, the internal relationship has two types. The first one is the relationship inside the directorate while the other is the relationship between the facility directorate and others. As for the external relationship, the study will speculate which type of relationship the directorate has, such as outsourcing, strategic alliance, and network.

2.5 Summary

This chapter reviews and summarizes the significant topic-related literatures: Mintzberg organization theory, Cotts facility organization theory, Barret ideal facility operation concept, and Chotipanich facility management concept in Thailand. It provides the basic understanding regarding the organization configuration in the healthcare organization.

The study, based on the literature review, then establishes three hypothesises and elaborates its analysis framework. These hypotheses are:

1) ***The organization configuration of facility directorate in Thailand's healthcare organization has the typical character of the machine organization.***

2) The organization configuration of facility directorate in Thailand's healthcare organization is building service based.

3) The outsourcing is dominant in the organization configuration of facility directorate in Thailand's healthcare organization.

As for the analysis framework, there are two stages: the organization analysis, and the result analysis. In executing both stages, the organization configuration model proposed by Johnson and Scholes is selected to be the framework for managing and categorizing the data from the case studies. In this model, the organization configuration will be divided into three parts: organization structure, organizational process, and relationship.

Chapter 3

Method: Case study and structured interview

3.1 Aims and overview

This chapter focuses on explaining the methods, employed for collecting the data for this study, in detail. There are two methods being used and these are case study and structured interview. In discussion, this chapter will be divided into two parts in accordance with these two types of method as well. Besides, the selected cases are also explained in this chapter as well

3.2 Case study

To investigate and gather data from the majority of, if not all, healthcare organizations in Thailand would be an ideal method in conducting this study. Nevertheless, such the approach is rather impractical and impossible considering the given time, budget, and workforce, not to mention other uncontrollable variables such as the cooperation of the participants. Therefore, the method of case study is chosen for collecting the data instead because:

1) It provides the essential and in-depth information sufficient enough to achieve the study's objective in exploring the organization configuration of facility directorate.

2) The method is feasible when considering time, budget, and workforce issue.

3.2.1 Case study criteria

The significant issue in implementing this approach concerns the representativeness of the selected case study. Therefore, the study aims for leading hospitals in Thailand to be the case for this research. The criteria that are used to determine the case selection are:

1. The selected cases have to be general hospitals as this type of hospital is usually the major healthcare organization in the region including country. Note that the term general hospital here includes the teaching hospital as well.
2. The selected hospital must provide the tertiary care, the most advanced and complex care service.
3. The healthcare facility is located in Bangkok because Bangkok is the capital of the country where most, if not all, leading organizations are located. The same rule applies to the healthcare organization as well.

4. The hospital must be classified in the top 20 healthcare providers in Thailand. This aspect certainly confirms the leadership for the chosen case. Nevertheless, it is unfortunate that there is no published article available in the country. Therefore, this issue is, instead, verified by Miss Siripom Chitplee, the senior public health nutritionist at the Department of Health in Thailand in Ministry of Public Health.
5. The hospital flow of in-patient and out-patient compared to the sum statistic provided by the Thai Ministry of Public Health[1]. The hospital is considered to be one of the leading organization index because it demonstrates the acknowledgement and acceptance from the public. In certain cases, the figure, divided between local and international, represents the degree of acceptance of the hospital in the international level as well. The comparison of the flow is made by using 2.50 million patients and 23.03 million patients for the public hospitals to in-patient and out-patient flow respectively. In the same order, the private hospital statistic is compared to 1.54 million patients and 4.03 million patients. However, it should be notified that these four figures only refer to the number of in-patient and out-patient flow in the general hospitals in each sector and not the total number of the flow.
6. The size of healthcare facility by considering the number of beds is over 400.[2] This aspect relies on the norm that the larger the hospital is, the better it is, similarly to other types of organization.

3.2.2 The selected case studies

Initially, there are ten hospitals selected to be the case for this study. Nonetheless, two of them refuse to cooperate due to certain essential reasons. Thus, this leaves the study to eight cases. These hospitals can be divided into two sub-groups. The first group contains four hospitals operating as the public organization under the direction of another related authority as its parent organization. The rest are private hospitals also operating under the direction of their parent organization. According to certain essential reasons, these case studies will be referred as Hospital A, B, C, D, E,

[1] Note that the statistic is a few years back.

[2] Referred from the medical management books explaining that the management system is likely to be different when the hospital has more than 400 beds.

F, G, and H. Hospital A to D belong to the first sub-group, while the others to the second sub-group. The following part provides the background of each selected case, which reflects the case's impressive profile as the leading healthcare organization. The context also includes the information regarding the facility directorate in each organization providing the basic understanding for each case. Note that the figure in parenthesis identifies the result from comparison in the fifth criterion.

Case study background

Case 1: Hospital A

Hospital A is the oldest and largest hospital in Thailand, founded in 1888 after the worldwide cholera outbreak by the one of the most beloved and esteemed King of Thailand, King Chulalongkorn (King Rama V). It is in fact belonged to one of the most famous medical faculties in Thailand operating as one part of the whole organization. The hospital has approximately 2,600 beds with the remarkable profile of giving services to 1.6 million (6.95%) outpatients and 80,000 inpatients (3.20%) annually. There are over 9,000 staffs working in this hospital. The facility has 72 buildings, approximately 370,000 m^2, on the current site that has the area of 123,000 m^2. It is one of the most congested medical institutions in Thailand. (Wikipedia, 2006)

This hospital operates as a public organization. In its tremendous organization size and complex process system, there is a division, named *architecture and engineering*, responsible for the facility management (FM) duties. This division is directed by one of the hospital vice directors. There are a total of three departments in this division: architecture services, maintenance and engineering services and building services. Nevertheless, there are many other FM-related departments grouped to other divisions such as laundry and linen department, food and nutrition department, transportation unit, and grounds unit. There are a few possible reasons to explain this fragmentation situation. Mainly, it is due to the nature of the bureaucratic organization of the hospital that resists the change in rearranging the divisions, departments and units or making any adaptation to the organization, particularly changes that would have a negative impact to the organization work unit such as de-role and de-power the unit. The other important cause is the cultural aspect, for example, the concept used in arranging departments. In this case, the obvious instance is placement of the laundry

and linen department and the food and nutrition department to another division with giving the reason that these two departments contain works about hygiene issues.

At present, there is the project for the hospital facility expansion being conducted. The organization bought a neighbourhood site to construct more buildings in order to extend its capacity for serving the patients. After this project finishes, this hospital will be the largest healthcare facility in Southeast Asia with the capacity of more than 4,000 beds and its total building area will be raised up to over 600,000 m^2. Besides this project, there are other two expansion projects of the hospital to the other two locations aiming to move certain working units out of the current site.

Case 2: Hospital B

Hospital B, one of Thailand utmost leader healthcare facilities, was established in 1914 by King Vajiravudh (King Rama VI) together with his brothers and sisters in order to succeed King Chulalongkorn, his father, with the determination to build a healthcare organization that helps and treats any ill people equally and improve Thai people's living standard. The hospital contains approximately 1,400 beds. It serves around 1.15 million (4.99%) outpatients and 42,000 inpatients (1.68%) each year. The facility has about 80 buildings on one site. The total area of buildings is approximately 250,000 m^2. In operating this hospital, the organization works together in corporate with one of the most famous medical faculties in Thailand. There are over 6,000 staffs working in the hospital, of which 1,000 are the staff from the medical faculty.

This hospital in fact does not belong to any state agencies but to the Thai Red Cross Society which is the international and independent organization, but the system in operating and managing the organization including its culture is rather similar to public organizations due to certain unidentified reasons. This hospital's organizational configuration just underwent the tremendous change owing to the new board's decision in re-organization. Under the direction of the hospital director, there is one Assistant director assigned to be responsible for the whole facility management works in the organization and as the position of assistant director in purchasing and high-rise building management. In this division, there are three main departments: security, maintenance and engineering and building and environment.

Case 3: Hospital C

Hospital C is a public hospital owned directly by Thailand's Ministry of Public Health. It was founded in 1951, with the aim to help treat solely women and children and as the hospital specializing in female medical issues. The hospital gained exceptional creditability and reputation after its successful operation for separating Siamese twins in the 1950s period. In 1976, the government decided to change this specialized hospital to be a general hospital serving all people. After that, the hospital continually kept growing, expanding its facility and medical service capabilities in order to fulfil the demand of Thai patients. The hospital now has over 1,200 beds for serving inpatients and annually serving 870,000 outpatients (3.78%) and 43,000 inpatients (1.72%) with the medical services. Its facility building area is approximately 113,000 m^2. There are around 3,500 hospital staffs working in this organization.

Owing to the dramatic change in country context including the government, this hospital's organizational configuration was just re-organized a few years ago after almost 20 years of unchanged stage. In this novel configuration, there are two main departments that are responsible for facility management duties. Both of them are directed by the administrative affairs vice director. These two departments are: general administrative department and material and maintenance department.

Case 4: Hospital D

According to the second National Economics Development Plan, the Thai government approved to build the fourth medical school in 1964 in order to produce more medical professions to respond the demand in the country. In conducting this medical school project, Hospital D was part of this plan as one of the school facilities to be established for serving the medical students in practice during their education as well as for providing the medical services to the people. The hospital, founded in 1969, originally had 500 beds capacity. Now it was grown to 980 beds with the hospital capability to serve 700,000 outpatients (3.04%) and 31,000 inpatients (1.24%) yearly. Currently, the hospital has 28 buildings with the area over 184,000 m^2 and the number of staff in the organization is over 6,000 people.

In this hospital organizational configuration, the problem of fragmentation arrangement in the facility management department is also founded. Similar to Hospital A, there are mainly two reasons that this situation remains unchanged: the resistance to

change of the bureaucratic organization and the cultural aspect. In this organization structure, there are 11 departments. Five of them relate directly to facility management duties: food and dietetics service department, laundry and linen service department, housekeeping and transportation service department, repair and maintenance service department and security service department. All these departments are further divided into six groups. Five of them are assigned to each hospital deputy director. The other is directly controlled by the hospital director. In grouping, the facility management related departments are divided into three groups. The first group called facility group directed by the deputy director contains housekeeping and transportation service department and security department. The second group, directed by another deputy director, contains food and dietetics service department, laundry and linen service department and the last one, directly under the hospital director control, has repair and maintenance service department.

Case 5: Hospital E

With an excellent profile as a hospital, Hospital E is certainly one of the most successful private hospitals in Thailand. It is the largest private hospital in Southeast Asia. It is the first hospital in Asia to be accredited by the US-based Joint Commission on International Accreditation (JCIA) and is the only hospital in Thailand to be accredited as so far. It is also the first private hospital to be awarded the Hospital Accreditation based on US and Canadian Standard from the Thai government. It has other 13 offices located abroad and its success contributes to the parent organization business growth owing and operating other 4 overseas hospitals. The hospital has a total of 554 beds for serving inpatients. It gives the medical services to 980,000 outpatients (24.32%)* and 29,000 inpatients (1.88%)* yearly. One third of the figures are international patients from over 150 countries. The hospital has approximately 100,000 m^2 in area and over 3,400 staffs working.

This hospital is a public company traded on the Stock Exchange of Thailand. The majority of shareholders are from one of the most significant Thailand financial institutions and one of Thailand's most respected business families. In this organization, there is a division called property management, set to be responsible for facility

* Notify that this figure include both local and international clients. Therefore, it is possibly that the result is rather overstated in certain degrees.

management duties. This division consists of 7 departments: environmental services, engineering and maintenance, government relationship property leasing, transportation, security, staff dormitory and employee relations.

Case 6: Hospital F

Established in 1972, Hospital F contained only 100 beds in four-storey building with 56 staffs aiming to help treat the sick people who could not receive the service from the public hospitals due to the problem of medical facility and staff shortage. At present, it has become one of the most successful Thai private hospitals. Its achievement contributes to its parent organization business growth owing other 13 hospitals located separately throughout the country and currently setting up 4 offices abroad. Its size has grown to 550 beds with more than 2,400 staff to handle the flow of 89,600 inpatients (5.82%)* and 750,000 outpatients (17.61%).* The hospital has received Hospital Accreditation, ISO 9001:2000, and ISO 14001 to guarantee the organization excellence standards. There is also a significant amount of international customers using this hospital services from more than 100 nationalities. The hospital now has a building area over 140,000 m^2.

Recently, this healthcare organization has dramatically adapted its organizational configuration to suit their working system and to effectively respond the dynamics in the business world. In this organization, all facility management related work units are neatly grouped under the Director of Facility Management. Totally there are nine departments belonged in this division: property and premises, outlets, food and nutrition, engineering services, housekeeping, grounds, vehicle and transportation, security and laundry and linen.

Case 7: Hospital G[**]

Hospital G is one of the most well known private hospitals in Thailand. This private hospital is actually the second branch hospital of its private healthcare group, which has other 2 hospitals located separately in Bangkok and one another in other provinces. In this group, Hospital G has the largest service capacity accommodating

[**] Hospital G is the only organization that does not provide the data of patient flow due to some difficulty reasons.

around 500 beds, of which 400 are currently operated. There are approximately 1,750 staffs in the hospital and the building area is 94,000 m^2.

Recently, this healthcare organization including all branch hospitals just made a tremendous change to its organizational configuration. Overall, the whole organizational configuration is still not stable and can be changed continually, according to the interviewee, since at this period there was a change to the hospital Board of Directors. From the latest information gathered, the facility management related departments are divided in to two divisions: services division, and support services division. There are six departments related to facility management duties: housekeeping, food and nutrition, transportation, security, engineering and maintenance, and material.

Case study 8: Hospital H

"Hospital for Thais" has always been the mission for hospital H throughout its 26 years of operation. This hospital was founded in 1976 aiming to service customers in the local area who want the convenience of receiving qualified medical service. Since then, the organization has continuously grown to success. The organization's authorized capital increases from 20 million Thai baht since the hospital opened in 1980 to 450 million Thai baht at present with the prospect to 500 million Thai baht in 2007. The hospital has also expanded the corporation to more than 20 hospitals in other provinces creating the organization network and its success leads its parent organization to expand its business by establishing another hospital in Bangkok. At present, it has 435 beds capacity to serve the in-patient with 1,800 highly qualified staff. The hospital annually serves 110,000 inpatients (7.14%) and 430,000 outpatients. (10.67%)

In this healthcare organization, there are two major divisions containing all facility management work units: facility and services and engineering and maintenance. In the first division, there are eight departments: housekeeping, security, vehicles and transportation, tailor, laundry and linen, food and nutrition, stretchers and retail shop. As for the latter division, the group recently re-merged into the hospital after the division de-merged from the organization for a while to generate the other type of service businesses.

After the case study is elected, the next stage is to carry out the personal interview in each case study.

3.3 Structured interview

This study chooses the personal interview because it is suitable for acquiring the qualitative descriptive information, which is the type of information that this study requires. It allows the researcher to access information more accurate and in-depth compared to the survey by questionnaire since the interview provides a chance for the participant or interviewer to ask and give further information related the topic. Some may argue that the questionnaire can have also provided an additional section for filling in but, for Thai culture and norms, this can be proven to be a failure. Moreover, based on the cultural aspect, the personal interview is also considered more respectful and more welcomed.

Finally as perceived, the largest advantage for the interview method is that it allows the research to explain the topic making the participant understand which information is required more precisely. This becomes essential because the concept of facility management is still poorly understood even to the facility manager himself. Most understand the work as merely the building services. The other reason that supports this benefit is the lack of understanding and knowledge in management. Undeniably, there is a chance that certain participants do not understand the topic well enough and need certain more clarification and explanation in order to help them answer the questions. In addition, the other major drawbacks in using the survey questionnaire are that:

1) It is likely that the received information contain errors because the person who completes the form is the person being assigned, not the one who the questionnaire is intended for do due to that intended person not having enough time.
2) Or it is likely that the information will never been filled in and neglected unintentionally giving the possibility that the manager tends to have too little time to do his work, let alone the other additional work.
3) Giving the "red tape" work process of public organization, there is a high possibility that the questionnaire will accidentally lose in one of the process steps.

3.3.1 The interview questions

To collect the information, the interview questions are designed and categorized to these three topics, which follows the framework used in this study, and these are organization structure, organizational process, and relationships. Furthermore, the question concerning the future change is also created and added at the ending part for further analysis regarding trend prediction. Originally, the question is designed to be the explanatory open-end question, but, in the field study, this proves to be difficult to many participants. Thus, the alternative interview question is added to give more clarity in case the interviewee cannot respond to the question. The detail in each section can be seen in the example interview form shown in Appendix A.

3.3.2 The interviewees or participants

The other aspect of interview is to choose the interviewee. In this study, the expected participant is the facility manager. However, it should be notified that this is not the absolute rule. In certain cases, the facility manager is likely to be unavailable for the interview due to his busy time schedule, particularly those deputy directors. Hence, the facility related department director will be interviewed instead as they are the next rank officer in the authority, or any assigned officer in case the deputy director or the hospital director gives the duty to the officer.

3.3.3 Making interview

This part is for explaining the process in conducting the interview in the selected case studies. The main aim is to provide recommendations to other researchers, particularly those who plan to conduct the study concerning Thailand healthcare organization.

The first and foremost important stage is sending the permission letter to the organization. This should be done before the intended interview appointment at least 7 working days in the private hospital group and one month for the public hospital group. Note that each organization processes the work in varied speed. In the tight time study, the recommendation is to clearly specify which person and position in which department that the researcher aims to make the interview. It also significantly helps to notify the date expected to making the interview in the letter including the time such as at two in the afternoon, or at nine in the morning. After sending the permission letter, the critical

task is to continually follow up. The long negligence can cause the researcher to resend the permission letter and wait for another month.

When the permission passes and the date is marked, the interview is then executed. The critical thing is the punctuality and manners. After the interview session, it will be advantageous to ask for the contact number in case there are further followed questions or any additional questions. Finally, the appreciation for corporation letter is suggested to be done. This can be done after the study finishes together with handling the study to the organization if the organization requests.

3.4 Summary

This chapter explain two methods applied for collecting the information in this study. The first method is the case study. It has six criteria for selecting the case and these are:

- It has to be general hospital.
- It has to provide tertiary care service.
- It has to be located in Bangkok
- It has to be classified in the top 20 healthcare providers in Thailand.
- It must have the acceptable in-patient and out-patient flow.
- It must have more than 400 beds.

Relying on these criteria, ten cases are selected. However, only eight cases corporate and these hospitals are named anonymously due to certain reasons as Hospital A, B, C, D, E, F, G, and H.

The other method is structured interview, or personal interview as it is suitable to provide the qualitative descriptive information for this study. In designing and categorizing the interview question, it follows the analysis framework divided into three parts: organization structure, organizational process, and relationships. As for the participant, the study aims to interview the facility manager or the related department manager. Finally, the process in conducting the interview is elaborated including certain important suggestions involving the permission process.

Chapter 4

Results and findings

4.1 Aims and overview

The purpose of this chapter is to demonstrate and summarize the findings from the investigation in the chosen case studies forming the generic organization configuration of facility directorate in Thailand's healthcare organization. The chapter will be described by using Johnson and Scholes organization configuration framework consisted of three aspects: organization structure, organizational processes, and relationships

4.2 The findings in case study investigation

In this part, the study will display the result in investigating the organizational configuration in each case study. As mentioned before, the framework in investigation, based on Johnson and Scholes model, has three composites: organization structure, organization process, and relationship. The investigation results will be arranged in this order, respectively.

4.2.1 Organization structure

Structure type

All eight hospitals share similarity in using the functional type of organization structure for the facility department regardless of the hospital size and the organization sector whether public or private. According to the interviewees, there are both advantages and disadvantages from this type of arrangement. All cases identify two identical benefits received from this structure. The first one is the clear definition of responsibility among work units preventing the confusion in working system. The other advantage is the effectiveness.

Meanwhile, most cases have the same drawback concerning the manager's over-routine-workload. Similar to Johnson and Scholes explanation about the functional structure, most managers are overburdened by the routine works and face the problem in allocating time to do the strategic work for the department. The solution to this situation used by most managers in the cases is responsibility and authority distribution

to other key staffs in the department such as the sub-department head helping the manager managing the routine works. The other choice most managers choose to deal with this issue is contributing his or her time, besides the office hour, for the strategic and management work.

There is also the other disadvantage found in this study, the problem of alienation among the departments in certain cases. To handle this topic, most organizations arrange the routine meeting gathering the managers from each work unit to talk and listen to one another creating the relationship among them and using them to generate it further down to the staffs in the department. In certain cases, the organizations arranges the activity bringing the staff from each work unit to work or learn together for a period of time helping to establish the relationship among them.

Structure compositions (Functions) and manpower

Structure compositions

The facility functions found in facility directorate of the case studies are:

- Environment services (also known as facilities, buildings, housekeeping and cleaning)
- Gardening (also known as plants, grounds, or general building maintenance which is mostly included in the first function.)
- Transportation
- Engineering and maintenance including medical equipment.
- Security
- Property and premises
- Catering (also know as food and nutrition)
- Laundry and linen.

There are also other functions included in facility department in certain organizations such as material and purchasing, patient transportation, outlets, and employee relations, while some facility functions are totally excluded from every case's facility directorate such as communication, and printing unit.

Nonetheless, the size, the status and the grouping of these functions to form facility directorate are rather varied from case to case. Certain hospitals have the

independent and full-function facility directorate. Some have independent but some-function directorate, such as department having housekeeping, security, transportation but not maintenance and others. The others have it as one sub-unit belonged to other division, such as administrative division.

In this last case, the study will assume that sub-unit as the organization's facility directorate and assume the top manager of the division as the facility director. The following Figure 4.1 to 4.8 illustrate the organization structure of each case study's facility directorate, identified by the bold line and bold letter for the facility manager. The figure also includes other facility-related function units that belong to other division presented in the thinner line.

The other related information demonstrated here is the manpower in facility directorate shown in Table 4.1 to 4.8. In calculating the manpower, it is noted that the study includes all existing major facility-related function units in the hospitals, though the units do not belong to the facility directorate, in order to establish the accurate result for further data analysis.

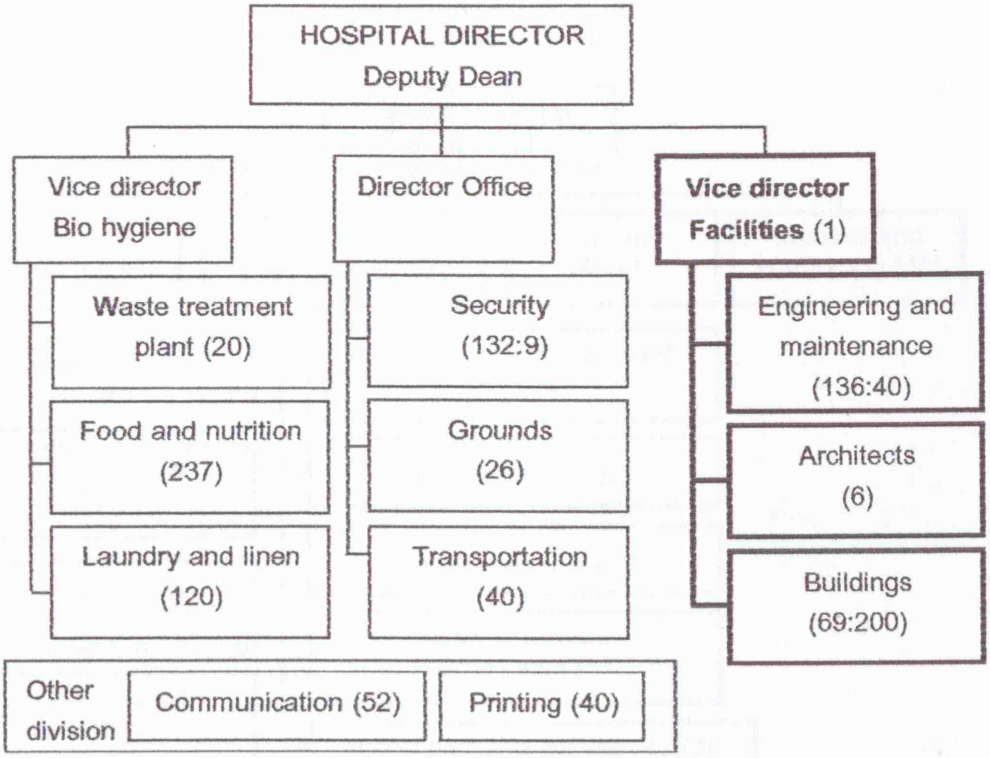

Figure 4.1 FM Organization structure in hospital A

Position/ Department	in-house staff	outsourced staff	total staff
Vice Director	1	0	1
Architecture division	6	0	6
Maintenace division	136	40	176
Building division	69	200	269
Transportation unit	40	0	40
Plants unit	26	0	26
Security division	132	9	141
Food and Nutrition division	237	0	237
Laundry and linen division	120	0	120
Waste treatment plant division	20	0	20
Communication division	52	0	52
Printing unit	40	0	40
Total	879	249	1128
Total beds	2,600	**Bed ratio**	2.30
Total staff in hospital	9,300	**Staff ratio**	8.24
Total hospital area (m^2)	370,000	**Area ratio**	328.01

Table 4.1 Manpower in FM division of Hospital A

Noted: 1. The property and premise belong to the hospital's corporate centre, called Asset department operated independently and not in relation to the hospital facilities directorate.

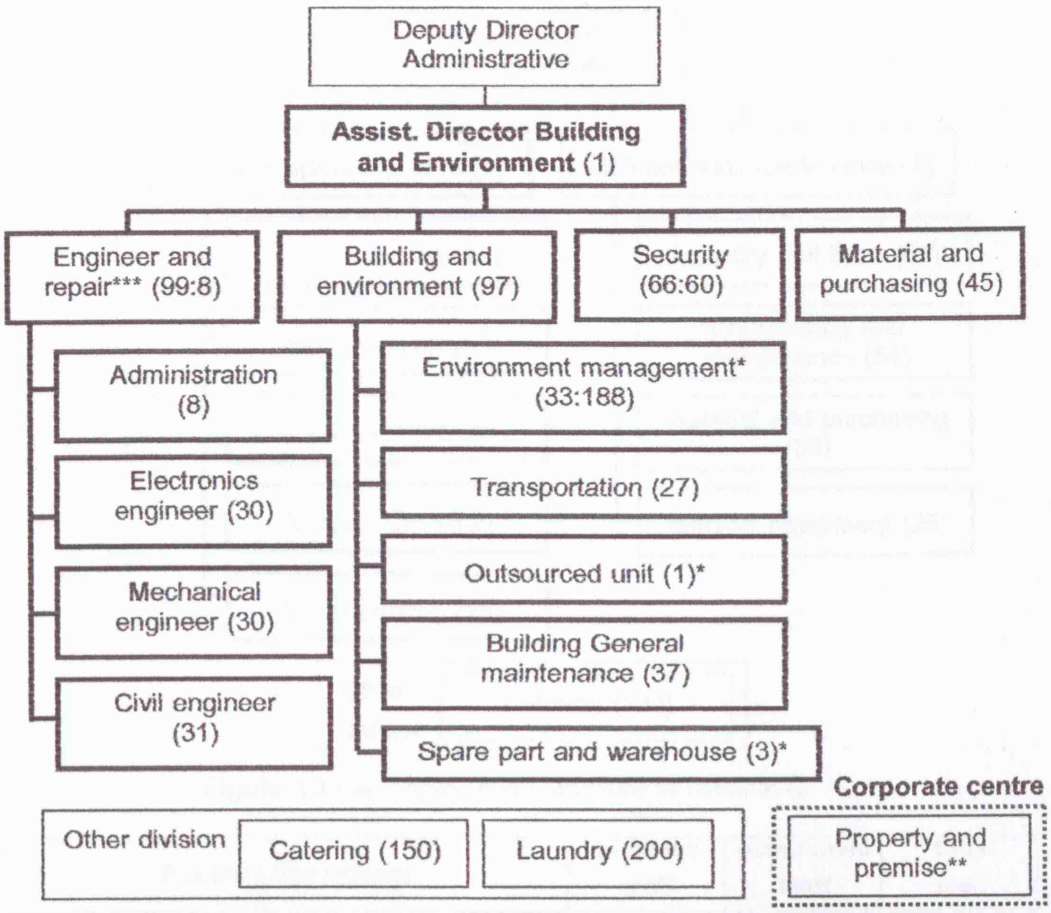

Figure 4.2 FM Organization structure in hospital B

Position/ Department	in-house staff	outsourced staff	total staff
Assist. Director	1	0	1
Engineering and repair department	99	8	107
Building and Environment department*	97	188	285
Security department	66	60	126
Material and purchasing	45	0	45
Catering department	150	0	150
Laundry and linen department	200	0	200
Total	658	256	914
Total beds	1,400	**Bed ratio**	1.53
Total staff in hospital	6,200	**Staff ratio**	6.78
Total hospital area (m^2)	250,000	**Area ratio**	273.52

Table 4.2 Manpower in FM division of Hospital B

Noted: 1. The staffs in outsourced unit and spare part and warehouse unit have already been included in the environment management unit, which is the department administrative.
2. The property and premise belong to the hospital's corporate centre, in facilities directorate.
3. *Engineering and maintenance does not include medical equipment.*

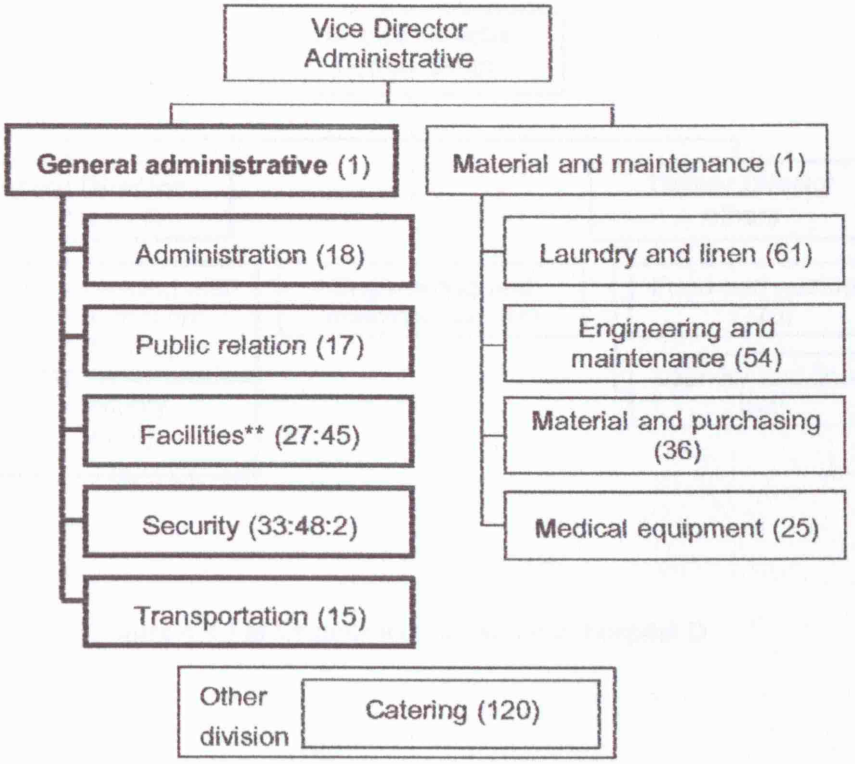

Figure 4.3 FM Organization structure in hospital C

Position/ Department	in-house staff	outsourced staff	total staff
Department manager	2	0	2
Department administration unit	18	0	18
Public relation unit	17	0	17
Facilities unit	27	45	72
Security unit	33	50	83
Transportation unit	15	0	15
Engineering and maintenance unit	54	0	54
Laundry and linen unit	61	0	61
Material unit	36	0	36
Medical equipment unit	25	0	25
Catering	120	0	120
Total	408	95	503
Total beds	1,230	**Bed ratio**	2.45
Total staff in hospital	3,500	**Staff ratio**	6.96
Total hospital area (m²)	113,000	**Area ratio**	224.65

Table 4.3 Manpower in FM division of Hospital C

Noted: 1.Facilities unit includes housekeeping and gardening.

2. The property and premise belong to the hospital's corporate centre. However, it is still inconclusive that the centre has facilities directorate or not and the department belongs to the facilities directorate or other.

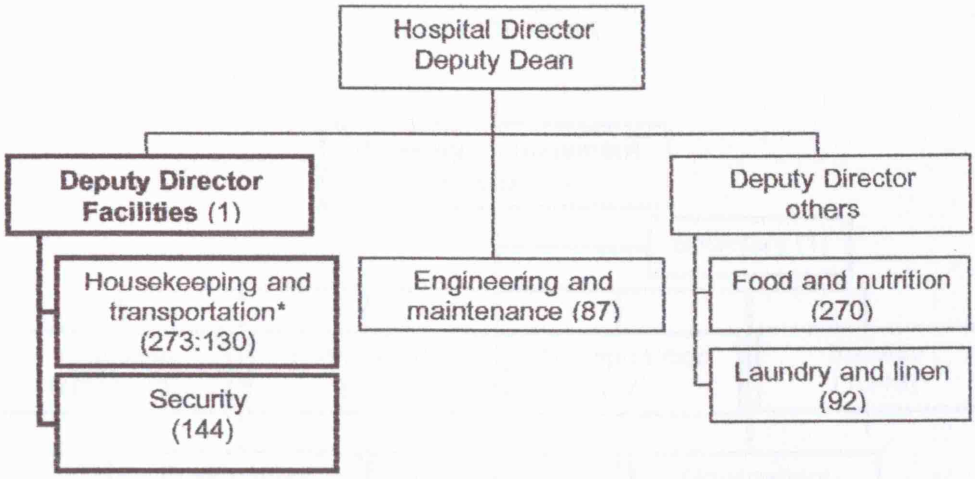

Figure 4.4 FM Organization structure in hospital D

Position/ Department	in-house staff	outsourced staff	total staff
Deputy director	1	0	1
Housekeeping and transportation dept.	273	111	384
Security department	144	0	144
Engineering and maintenace department	87	0	87
Food and nutrition department	270	0	270
Laundry and linen department	92	0	92
Total	867	111	978
Total beds	980	**Bed ratio**	1.00
Total staff in hospital	6,150	**Staff ratio**	6.29
Total hospital area (m²)	184,000	**Area ratio**	188.14

Table 4.4 Manpower in FM division of Hospital D

Noted: 1. Housekeeping and transportation department includes gardening.

2. The property and premise belong to the hospital's corporate centre. However, it is still inconclusive that the centre has facilities directorate or not and the department belongs to the facilities directorate or other.

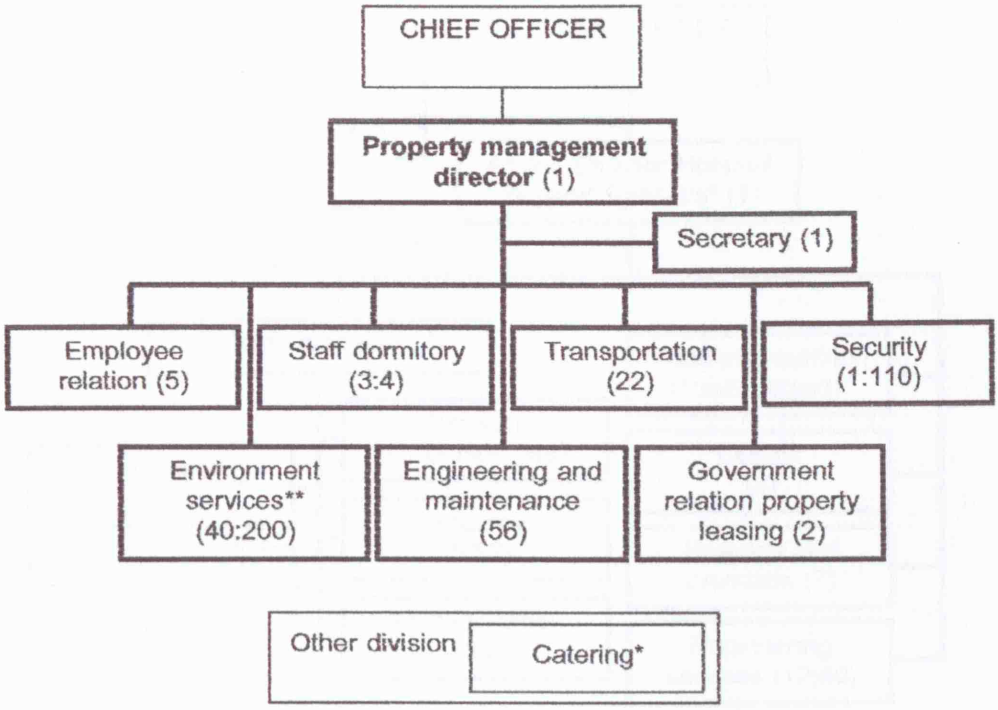

Figure 4.5 FM Organization structure in hospital E

Position/ Department	in-house staff	outsourced staff	total staff
Property management division director	1	0	1
Executive secretary (Admin.)	1	0	1
Government relation property leasing dept.	2	0	2
Environment services department	40	200	240
Transportation department	22	0	22
Engineering and maintenance department	56	0	56
Security department	1	110	111
Staff dormitory department	3	4	7
Employee relations department	5	0	5
Total	131	314	445
Total beds	554	**Bed ratio**	1.24
Total staff in hospital	3,300	**Staff ratio**	7.42
Total hospital area (m²)	123,000	**Area ratio**	276.40

Table 4.5 Manpower in FM division of Hospital E

Noted: 1. Catering is contracted out and other department is responsible for controlling.

2. Environment services unit includes gardening and copes with the contracted laundry company.

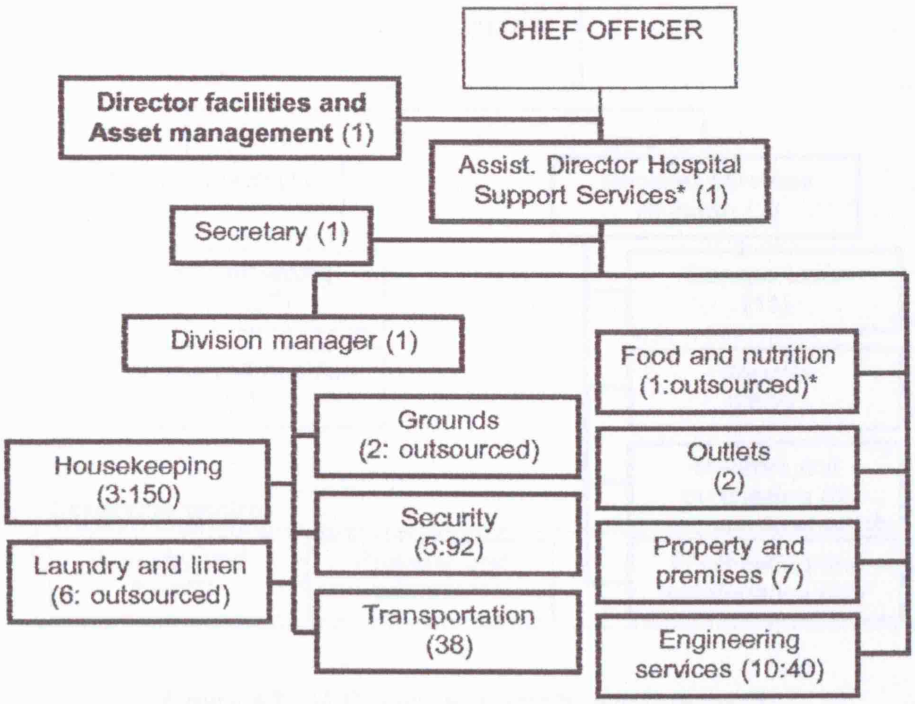

Figure 4.6 FM Organization structure in hospital F

Position/ Department	in-house staff	outsourced staff	total staff
Director facilities and asset management	1	0	1
Assist. Director hospital support services	1	0	1
Secretary (Admin.)	1	0	1
Division manager	1	0	1
Property and premises department	7	0	7
Outlets department	2	0	2
Food and nutrition department	0	0	0
Engineering services department	10	40	50
Housekeeping department	3	150	153
Grounds department	2	0	2
Vehicles and transportation department	38	0	38
Security department	5	92	97
Laundry and linen department	6	0	6
Total	77	282	359
Total beds	550	**Bed ratio**	1.53
Total staff in hospital	2,500	**Staff ratio**	6.96
Total hospital area (m²)	140,000	**Area ratio**	389.97

Table 4.6 Manpower in FM division of Hospital F

Noted: 1. Assist. Director is directly responsible for controlling the catering outsourced.

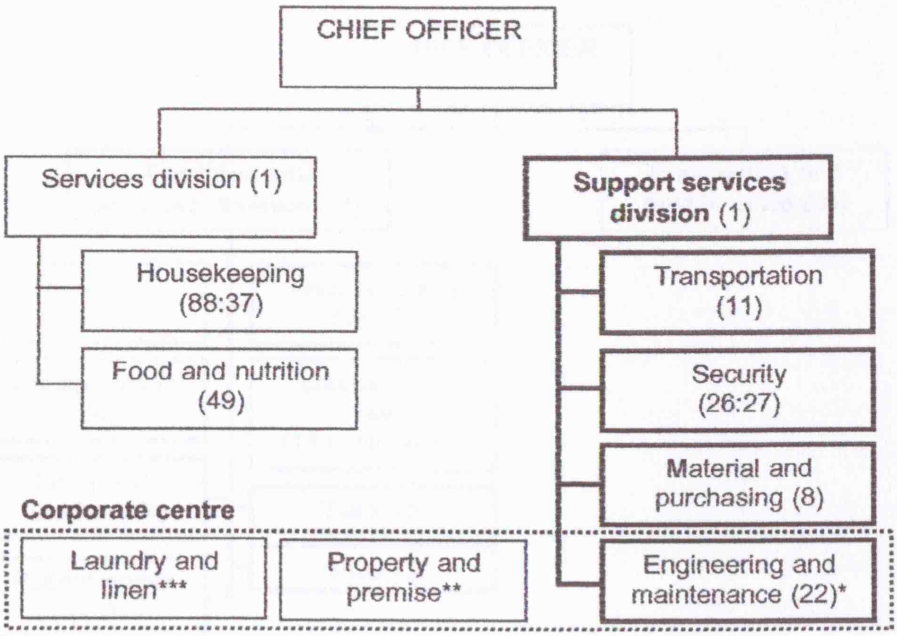

Figure 4.7 FM Organization structure in hospital G

Position/ Department	in-house staff	outsourced staff	total staff
Division director	1	0	1
Housekeeping department	88	37	125
Transportation department	11	0	11
Security department	26	27	53
Engineering and maintenance department	22	0	22
Material department	8	0	8
Food and nutrition department	49	0	49
Total	205	64	269
Total beds	400	**Bed ratio**	1.49
Total staff in hospital	1,750	**Staff ratio**	6.51
Total hospital area(m²)	94,000	**Area ratio**	349.44

Table 4.7 Manpower in FM division of Hospital G

Noted: 1. The maintenance department is actually directed by the hospital corporate parent organization, not by the branch hospital executive.

2. The property and premise belong to the hospital's corporate centre, in facilities directorate.

3. Laundry is outsourced and controlled by the corporate centre but there is still inconclusive that the department belongs to facilities directorate or other. There is no gardening department.

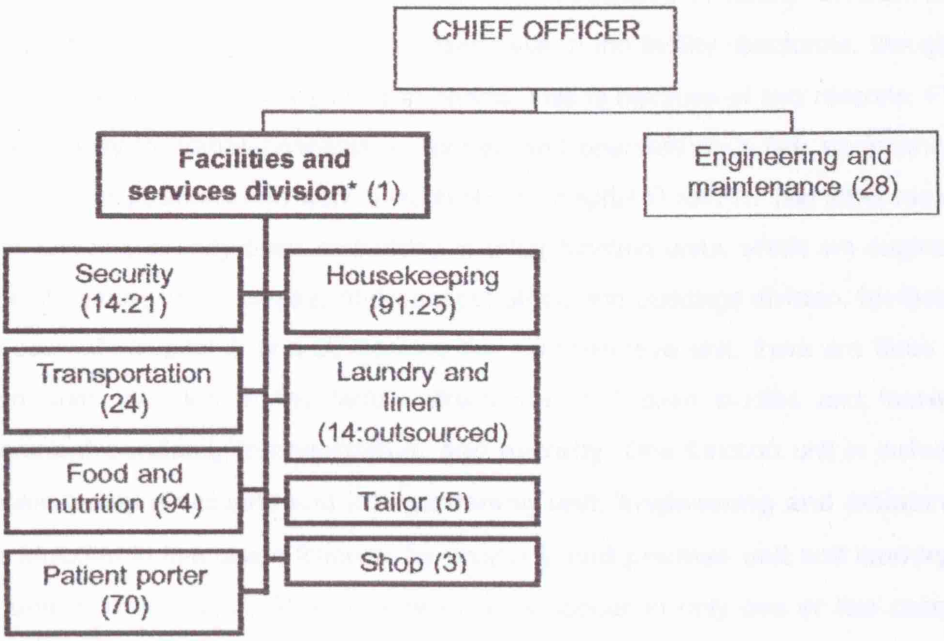

Figure 4.8 FM Organization structure in hospital H

Position/ Department	in-house staff	outsourced staff	total staff
Division manager	2	0	2
Security department	14	21	35
Transportation department	24	0	24
Food and nutrition department	94	0	94
Housekeeping department	91	25	116
Laundry and linen department	14	0	14
Stretcher department	70	0	70
Tailor unit	5	0	5
Shop unit	3	0	3
Engineering and maintenance department	27	0	27
Total	344	46	390
Total beds	435	**Bed ratio**	1.12
Total staff in hospital	1,800	**Staff ratio**	4.62
Total hospital area(m²)	62,000	**Area ratio**	158.97

Table 4.8 Manpower in FM division of Hospital H

Noted: 1. Facilities and services division manager is also responsible for property and premise management.
2. Grounds unit is embedded in Housekeeping unit

In general, there are a total of 18 function units registered in facility directorate. The **administration** is the only unit that all cases have in the facility directorate, though it is not seen in certain hospital organization charts. This is because of two reasons. Firstly, the unit, mostly in private hospitals, is formed and operated by a few staffs who also belong to other positions and work units such as Hospital G and H. The other reason is that the unit has already been embedded in other function units, which are engineering and maintenance, housekeeping and transportation, and buildings division, for instance, in the case of Hospital A and D. Besides the administrative unit, there are three other function units included in the facility directorate in 7 case studies and these are: **environment services, transportation, and security**. One function unit is included in six cases' facility directorate and it is **gardening unit**. **Engineering and maintenance unit** is included in five cases followed by **property and premise unit** and **laundry and linen unit** in three cases. The other work units appear in only one or two cases, as Table 4.9 shows.

No.	Work units	Hospital							
		A	B	C	D	E	F	G	H
1	Administration	•	•	•	•	•	•	•	•
2	Environment management	•	•	•	•	•	•		•
3	Transportation		•	•	•	•	•	•	•
4	Security		•	•	•	•	•	•	•
5	Gardening		•	•	•	•	•		•
6	Engineering and maintenance	•	•			•	•	•	
7	Property and premises					•	•		•
8	Laundry and linen					•	•		•
9	Catering						•		•
10	Material and purchasing		•					•	
11	Architect	•							
12	Outsourced units		•						
13	Spare part and warehouse		•						
14	Public relation			•					
15	Staff dormitory					•			
16	Outlets						•		
17	Shops								•
18	patients portering								•

Table 4.9 shows work units included in FM directorate of each case study.

Based on this summary, the generic organizational structure model of facility directorate in Thailand healthcare organization is established. **The model has the functional type of structure and it is consisted of six function units**, those with more than 60% chances to be included. However, it is noted that the administrative unit is likely to be hidden in the case of private hospital according to the reason mentioned above. The directorate will operate under the direction from one of the hospital deputy directors, in public organization, and one of the chief officers in the private one. Figure 4.9 demonstrates this generic model.

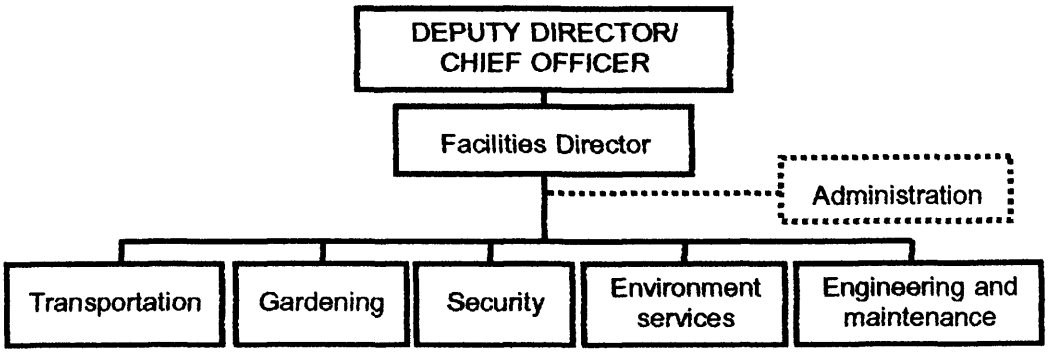

Figure 4.9 Generic organization structure model of facilities directorate in Thailand healthcare organization.

Nevertheless, further analysis shows that the generic model for each sector, private and public, contains a small difference from Figure 4.9. The model for public organization has five units, without the maintenance and engineering service unit, while the model for the private group have two more function units, property and premise, and laundry and linen, as shown in Figure 4.10 and 4.11.

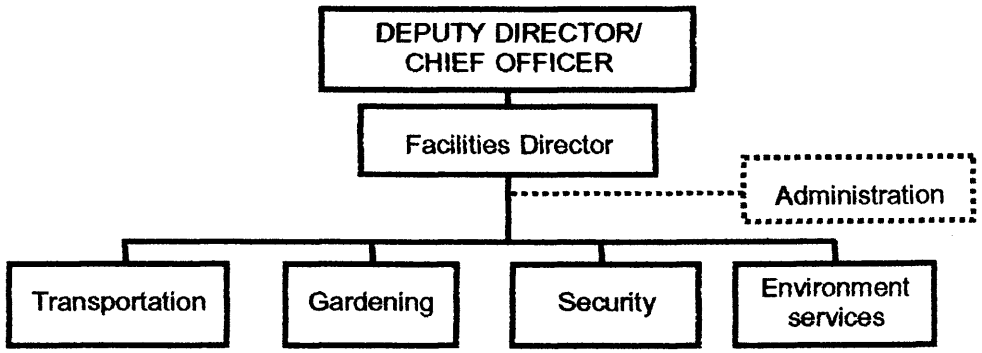

Figure 4.10 Generic organization structure model of facilities directorate in Thailand public healthcare organization.

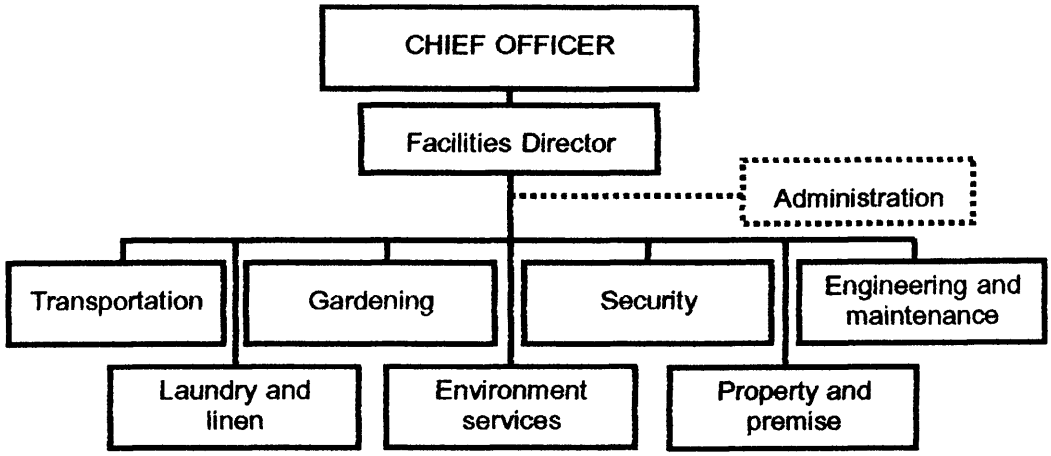

Figure 4.11 Generic organization structure model of facilities directorate in Thailand private healthcare organization.

Manpower

The study then focuses on the manpower issue. The study sets up three aspects for analyzing this issue and these are: the bed ratio, the staff ratio, and the area ratio. These three ratios are the ratio between the number of staffs in facility-related function unit to the number of hospital beds, the number of all hospital staff, and the hospital area, respectively. The data is shown in Table 4.10, Figure 4.12 and 4.13.

Hospital	FM staff	Bed	Staff	Area	B ratio	S ratio	A ratio
Hospital A	1128	2600	9300	370000	2.30	8.24	328.01
Hospital B	914	1400	6200	250000	1.53	6.78	273.52
Hospital C	503	1230	3500	113000	2.45	6.96	224.65
Hospital D	978	980	6150	184000	1.00	6.29	188.14
Hospital E	445	554	3300	123000	1.24	7.42	276.40
Hospital F	359	550	2500	140000	1.53	6.96	389.97
Hospital G	269	400	1750	94000	1.49	6.51	349.44
Hospital H	390	435	1800	62000	1.12	4.62	158.97

Table 4.11 The staff ratio, the area ratio and the bed ratio

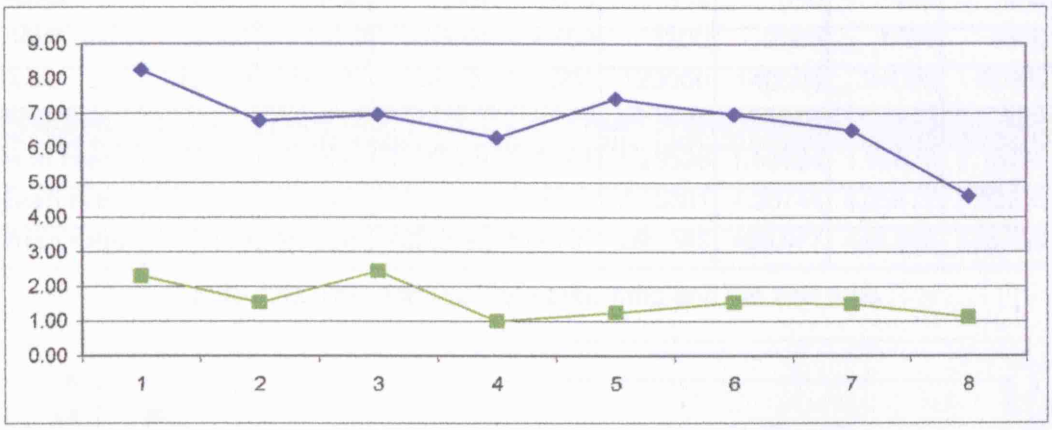

Figure 4.12 Staff ratio graph (blue) and Bed ratio graph (green)

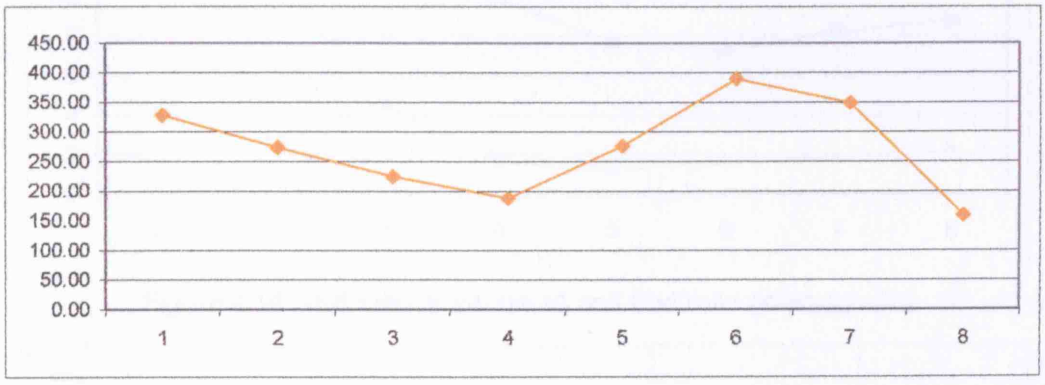

Figure 4.13 Area ratio graph

As can be seen, there is the trend suggesting that **the average ratio between the number of all hospital staffs to facility staff is approximately at 7 to 1**. The other indication found here concerns ratio between the number of beds and the number of facility staffs. Regarding this issue, there are two indications. The first one is that **the public hospital group with more than 1000 beds averagely has one facility staff per 2 beds**. The other is that **the private hospital group has one facility staff to every 1.5**

bed. However, it is obvious that the conclusive relationship between the number of facility staffs and the organization area cannot be established here.

Nevertheless, some disagreements may arise against this summary since there is an argument about the dissimilarity between each hospital's facility directorate. Hence, the study further applies the generic model of facility directorate to re-generate these data relationship and those three diagrams as shown in the following Table 4.12, Figure 4.14, and 4.15.

Topic	Hospital							
	A	B	C	D	E	F	G	H
Beds	2600	1400	1230	980	554	550	400	435
Staff	9300	6200	3500	6150	3300	2500	1750	1800
Area	370000	250000	113000	184000	123000	140000	94000	62000
FM staff	653	519	269	616	431	344	212	204
Bed ratio	3.98162	2.6975	4.57249	1.59091	1.28538	1.59884	1.88679	2.13235
Staff ratio	14.242	11.9461	13.0112	9.98377	7.65661	7.26744	8.25472	8.82353
Area ratio	566.616	481.696	420.074	298.701	285.383	406.977	443.396	303.922

Table 4.12 The staff ratio, the area ratio and the bed ratio

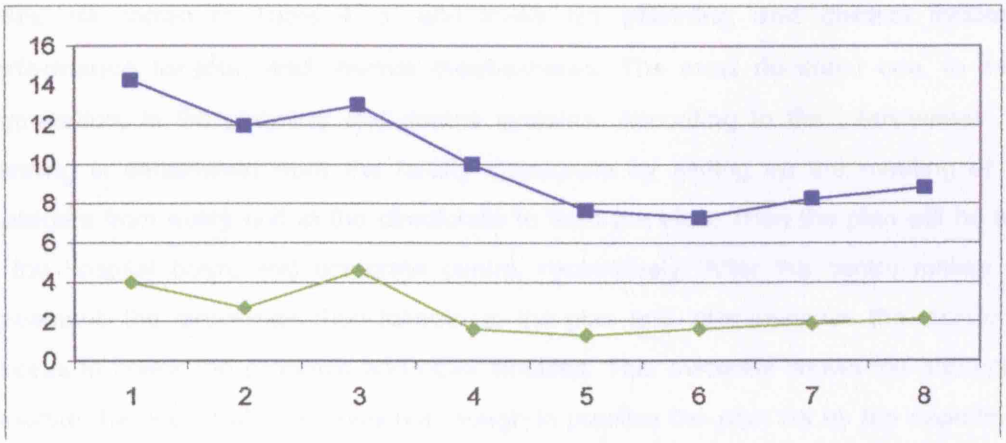

Figure 4.14 Staff ratio graph (blue) and Bed ratio graph (green)

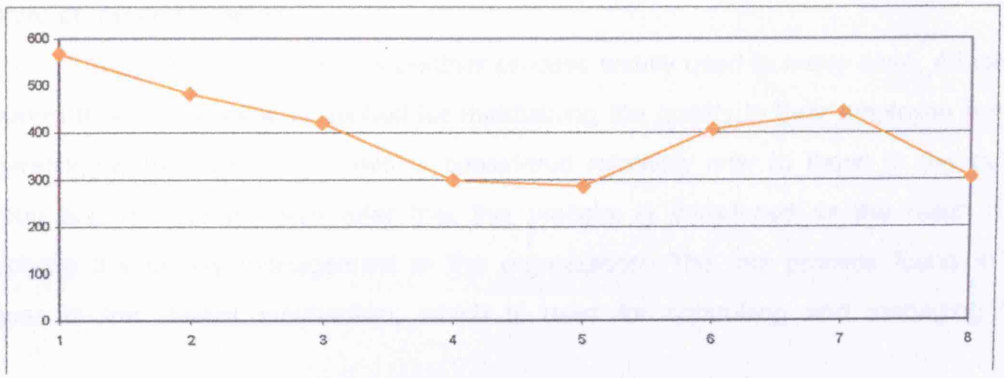

Figure 4.15 Area ration graph

Apparently, the outcome is greatly different in the trend of staff ratio. The only conclusion possibly drawn here is that **the group of private hospitals tends to have a staff ratio approximately at 8 to 1**, while there is no definite ratio for the public hospital group. Regarding the bed ratio, Figure 4.14 does reflect the relatively similar trend in the group of private hospitals. According to the diagram, **this group evidently has one facility staff for every 1.7 beds**. As for the area ratio, the relationship is still inconclusive.

Further study applies both public and private generic models to each hospital group and re-established these three diagrams. **The outcomes are strongly similar in that there is no conclusive trend in any ratios found in the public group, while in the private group, the staff ratio is 8 to 1; the bed ratio is 1.7 to 1, and the inconclusiveness of the area ratios.**

4.2.2 Organizational process

There are three main types of organizational processes found being used in all cases, as shown in Table 4.13, and these are **planning and control systems, performance targets, and market mechanisms**. The most dominant one, in every organization, is the planning and control systems. According to the interviewees, the planning is established from the facility directorate by setting up the meeting of the managers from every unit in the directorate to form the plan. Then the plan will be sent to the hospital board and corporate centre, respectively. After the centre makes the agreement, the directorate then follows up the plan and later launches the monitoring process to check the progress and other troubles. This evidently shows the attempt to generate the decentralization concept though in practice the plan set by the department mostly concerns the operation level, while the strategic level plan is still set by the centre of the organization.

The performance target is another process widely used in every case. All cases support that this process is applied for maintaining the quality in their employee works. Interestingly, this type of process is considered relatively new to those in the public group and all four of them refer that this process is introduced as the result from applying the quality management in the organization. The last process found in all cases is the market mechanism, which is used for controlling and managing the

outsourced companies. However, there is, so far, no sign of using this market mechanism to create an internal market in any organizations.

Besides, as the public organizations, **the public hospitals also, unquestioningly, use the bureaucratic cultural process as well. Furthermore, the study finds that the self regulation and personal motivation is now being used as another process in a few organizations such as Hospital D, F, and H.** The managers express that this process allow them to effectively boost the quality of their staff performance. The only concern to them is that how they help building and shaping their staff motivation.

Type of process	A	B	C	D	E	F	G	H
Direct supervision								
Planning and control system	•	•	•	•	•	•	•	•
Performance targets	•	•	•	•	•	•	•	•
Market mechanisms	•	•	•	•	•	•	•	•
Social and culture	•	•	•	•				
Self regulation				•		•		•

Table 4.13 The organizational process being used in the case studies

4.2.3 Organizational relationship

Internal relationship

The relationships inside the directorate obviously attempt to become less centralized as the data shows, for instance, the delegation of power and responsibility to other key staffs reducing the burden of the manager, and the way the planning process is being established and applied, though the degree of devolution is certainly different from one case to another. As for the relationship between the directorate and the hospital centre, it can be evidently categorized as the strategic control type, one of three stereotypes in dividing responsibilities between the centre and the business units provided by Goold and Campbell. This can be seen in the way the hospital centre controls the facility directorate as all it does is to establish the organization main plan and let the directorate to establish its own plan to follow. Regarding this planning issue, it is interesting that most, if not all, cases share similarity in their directorate plans being mainly operational concerned involving routine works and hardly the capital project work.

External relationship

There are only two types of external relationships found in the case studies and these are outsourcing, and strategic alliance. According to the data, only one third of the function units in the facility directorate has either one or two of these relationships, as shown in Table 4.14.

Type of relationship	Cleaning	M & E*	Security	Grounds	Laundry	Catering
Outsourcing	8	8	8	5	3	1
Strategic alliances					1	1

*Note that there is outsourcing in engineering and maintenance every case in form of the preventive maintenance for certain machines such as elevators. and chillers.

Table 4.14 The facilities units that have external relationship

As can be seen, the outsourcing relationship is dominant in every function unit, particularly in the cleaning, maintenance, and security. There are only two function units that have the external relationship as the strategic alliance, which are laundry and catering in Hospital G and F respectively. Further investigation also finds that both companies actually belong to the same corporate centre of Hospital G and F and both of them are expected to expand the corporate centre business to another hospital-related service area.

The study then investigates the reason for outsourcing and the actual results. All cases provide two similar causes for outsourcing. The first one concerns the cost reduction as the organization does not have to shoulder the long term expense of employee welfare, particularly the public group. The other reason is the advantage in reducing the trouble of recruitment. This is due to the problem of high-rated turnover of facility staffs making the organization have to continually recruit the new employee, which is rather problematic and disadvantageous to the organization in several aspects. However, the feedback from outsourcing can be divided into two types. The first one is the confirmation that the outsourcing effectively provides these benefits for the organization and that it is worth the value of money as well as the organization has the positive and acceptable result from this decision. The other type agrees that it gives these benefits but the outsourcing also gives them other problem about the quality control.

4.3 Summary

This chapter has described and summarized the findings from the case investigation. The result leads to the establishment of the generic configuration of facility directorate in Thailand hospital, briefly depicted as followed:

1. The organization structure of facility directorate is the functional type. It is fundamentally composed of six function units: administration, environment services, engineering and maintenance, security, gardening, and transportation. The formation has two more function units when considering only private hospital group and these are property and premise, and laundry and linen. The directorate manager is under the direct control of one of the chief officers or the hospital deputy director and the directorate has ratio between the facility staff and all staffs approximately 1 to 7 while the ratio between facility staff and the bed the hospital has is roughly at 1 to 1.5 in private hospital and 1 to 2 in public hospital.

Nevertheless, the ratio will be varied if the calculation includes only the staff in the units inside generic model. There will be no conclusive generic ratio regardless of the sector. Just two conclusive ratios can be found in the private hospital group. The first one is the ratio between facility staff and all staff, which is approximately at 1 to 8, while the second one is the ratio between facility staff and the bed the hospital provides roughly at 1 to 1.7. Both of these figures are also relatively similar when the calculation applies the generic model of private hospital, consisted of eight units, instead of the generic model, consisted of six units.

2. The organizational process found being used in the facility directory is rather similar in every case. There are three types of process being used in all cases and these are control and planning system, performance target, and market mechanism. The most dominant one, in all eight cases, is control and planning system. The cultural process is also dominantly being applied in the public hospital group, while there are a few hospitals apply the self control and personal motivation process as the additional method helping to increase the staff effectiveness.

3. Both internal and external relationships found in all cases are similar. The internal relationship inside the directorate becomes less centralized while the relationship to the hospital centre is the strategic control type. The centre establishes the organization plan and gives the directorate to create its own plan to follow the main one.

As for the external relationship, the dominant type found in every case is the outsourcing. There are six function units having the outsourcing and these are cleaning, maintenance, security, gardening, laundry, and catering. Two main perceived advantages from outsourcing are cost reduction, and recruitment problem decrease. However, there are two different feedbacks in practice. The first one is positive in outsourcing decision that it is worth value of money. The other accepts that there are advantages but rather criticism that the outsourcing also contains other drawback concerning the service quality control.

Chapter 5
Result analysis

5.1 Aims and overview

In this chapter, the result from the previous chapter will be analysed in four categories and these are hypothesis validation, future trend of facility directorate configuration, the facility management practice in Thailand's healthcare sector, and the possible improvements for FM by modifying FM configuration.

5.2 Hypothesis validation

After the generic organization configuration of facility directorate is summarized in the previous chapter, it is obviously show that the result partly supports the study hypotheses, described as followed:

Hypothesis 1: ***The organization configuration of facility directorate in Thailand's healthcare organization has the typical character of the machine organization.***

In analyzing this hypothesis, all three aspects in study have to be considered:

Organization structure

The most prominent character, in accordance with the machine organization, is that the structure is function-based with clear definition between working units. The work in the unit is routine and standardized by clear job description and manual for each task. The position hierarchy starts at the director, then the manager of each working unit, the team leaders in the units, and operators. The only hypothesis-contradiction is that the directory does not have its own technostructure unit but has the quality management department controls the work standard instead.

Organizational process

The planning and control system confirms the character of formal communication showing the rigid system of how to co-ordinate works. This character is rather vivid in the public hospital group, particularly notoriously known as red tape process. However, the introduction of using more de-formalized channel is also found in many cases. Two main reasons for this change are, firstly, to reduce the waste-time in processing any works increasing the productivity, and secondly to create more integration and relationship among the departments, which always the weak point of this

type of configuration, allowing the directorate work being done more harmoniously and effectively.

Relationships

Concerning this aspect, the result contradicts the hypothesis in that the directorate does not have such the high degree of centralization as the machine configuration. Indeed it proves that the power delegation is being exercised, cause of which, most case studies similarly say, to reduce the workload to the manager, another drawback from this type of configuration. Nevertheless, in the whole organization level, this devolution aspect is still not evident, considering that the significant plan or project is still initiated from the top manager of the hospital, or mostly from the board and the corporate authority.

Hypothesis 2: ***The organization configuration of facility directorate in Thailand's healthcare organization is building service based.***

In analyzing this hypothesis, it can be done by speculating only one topic, the organization structure.

Organization structure

In the previous chapter, three generic models of FM organization configuration are summarized, Figure 4.9 to 4.11. As can be seen, they evidently reflect this hypothesis as the diagrams show that the majority components are composed of the building service function units. These units are transportation, housekeeping, engineering and maintenance, gardening, and security.

Hypothesis 3: ***The outsourcing is dominant in the organization configuration of facility directorate in Thailand's healthcare organization.***

In analyzing this hypothesis, the focus is on the relationship topic.

Relationship

After considering the statistic detail in outsourcing service, it can be seen that the dominance of outsourcing trend is not as obvious as assumed. Taking three perspectives from three concluded generic model, the all-case generic model has six working units, four of which have the outsourcing, but only two units that the outsourced is the major service provider. The generic model for public hospital case has five working units, three of which contains outsourcing, but only two units that the

outsourcing is the major provider, while the private group generic model having eight working units has three out of five units that the outsourced is the major service provider.

Having validated the hypotheses, the study moves on to the next analysis concerning the future trend of FM directorate configuration.

5.3 Future trend of facility directorate configuration in Thailand healthcare organization

Based on the acquired information from the interview, the facility directorate configuration is likely to be more or less the same as the current one. The structure is definitely to be divided by type of function though the grouping and the component unit may have some changes. The process is still a combination of input-base and output-base with the previous more dominant than the latter. The style of internal relationship is similar to the current one but the external relationship, the outsourcing, is promising to keep increasing, particularly in the building service units such as housekeeping, security, and gardening. There are only two possibilities that the major alteration can occur in the configuration and these are:

- The hospital parent organization demands to change, incident of which is mostly due to the change in the board level of the parent organization, and
- The hospital executive board is changed.

After the current and future FM directorate configuration is clear, the study then synthesizes the configuration to explain the current facility management practice.

5.4 Facility management practice in Thailand healthcare organization

Earlier in the introduction, this dissertation begins with the purpose to explore facility management practice in the healthcare facility in Thailand. To achieve this aim, the result of facility directorate configuration found in this study is analyzed to illustrate the fundamental aspect of the current FM practice in the following part. In depicting this topic, the context will be divided into 3 sections: FM practice in operational, FM practice in strategic level, and the strategy applied in FM

FM practice in operational level

Based on the information in organization structure, it can be summarized that the facility management practice in Thailand's healthcare sector mainly focuses on the **operational level**. The scope of work mainly bases on building services as seen in the directorate function unit list: transportation, housekeeping, engineering and maintenance, gardening, and security. Two of these are the most significant functions that receive critical attention from the hospital. These two function units are transportation and the engineering and maintenance services. This can be seen from the chart data that shows the status of this unit and the statistic that shows the service is mostly provided by in-house.

FM practice in strategic level

As for the strategic facility management topic, it can be concluded that the issue is still under-development. So far, there is only one FM strategic function found being practiced at present and it is the property management, though this only applies to the private hospitals. In the public group, it is likely that the property management function belongs to the parent authority and having no sub-unit in the hospital at all.

Regarding the project works, i.e. the refurbishment or new construction, the facility management involves only in the operation stage not the strategic. Its role is as the controller or builder in the construction stage, such as control the works or implementing it by its own staffs, and as the operator in the post construction stage. Meanwhile it regrettably has very mild input in initiating these project works. Also the decision to process these projects is hardly based on the facility information since this aspect is also not to be found in current facility practice in any healthcare organizations. Mostly it depends on the hospital board vision or, in the public case, the parent authority board vision.

Further analysis leads to other two issues relating to FM practice in strategic level. The first issue is the existing of FM and its role in the parent organization of hospitals. Based on this study result, the answer to this issue has yet inconclusive. There is a rigid support showing FM being practiced in form of property or asset management existed in six out of eight cases but only four cases can be confirmed that either property or asset directorate exists as facility directorate in the parent organization. The second issue is the relationship including work system between FM in

the parent organization and FM in hospital. The study finds that it depends on the business model the parent organization has. For example, the parent organization of Hospital B, E, and F operates the business by letting its business units, such as hospitals and other hospital-related services including products, independently operate, while the parent organization's main function is to establish the corporate strategy, support, and monitor its business units. In this business model, the relationship between FM in hospital and FM in parent organization is distant. The work system is completely separated between both of them. Both directorates estrange each other same as the two different companies. The connection has only one channel which is to communicate via the hospital director. On the contrary, parent organization of Hospital G operates the business by integrating itself into the business unit management level. Besides setting the corporate strategy, its role is not only to monitor or to support but to operate the business unit in certain degree. Here the relationship between FM in hospital and FM in the parent organization is closer and the work system flows better than the previous type.

Strategy applied in FM

At present, the strategy used in facility management focuses on the input base, also called the cost centre. It can be seen in the organizational process that uses the planning and control system as the major system to control the directorate operation since this system concentrates on input base concerning the way the resource should be allocated. Moreover, the trend in downsizing the directorate and increasing the outsourcing affirm this conclusion even further. This trend is particularly evident in the public hospitals. Nevertheless, a minor change recently emerges. The other organizational processes have been introduced and applied in FM directorate and these systems are output based. Therefore, it is possibly that FM strategy in the future will change to insist more on the performance and, consequently, the customer needs.

5.5 The possible improvements for FM via modifying FM directorate configuration

In the introduction, the study demonstrates that improving the facility management can assist the hospital making improvement to face the recent including future critical situations and that the first step to improve FM is to understand the subject, which is the current FM practice. At this stage, the study has completed the

configuration synthesis and the current FM practice is explained. The following section will provide four possible improvements for FM via modifying FM directorate configuration. Although there are a myriad ways to make the improvement for FM, this study determines to propose just some of them that relate to the configuration subject because the subject is the key element of this study. These four possibilities are: **adapting the organization structure, adding crucial functions, staff quantitative and qualitative, and developing the organizational process.**

5.5.1 Adapting organization structure

Matrix structure

The idea is to adapt the existing structure by creating another axis to integrate the work and knowledge cross-functional. This other axis can be the buildings, the wards, or any specified area, as shown in Figure 5.1. By using two-axis structure, the power in controlling the staff according to functions still exists while another grouping axis can initiate the better cross-function relationship among the working units including the useful cross-function knowledge increasing the potential of the directorate staffs and work. Moreover, if there is the competition put into place, say the competition of the performance among specified location team, this competitiveness can certainly generate the better and more effective work produced by the team.

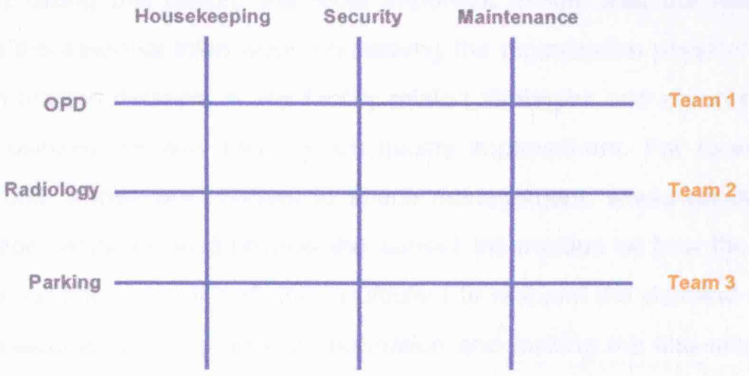

Figure 5.1: The example of matrix structure for FM

However, this type of structure does not provide only the advantages. There are also the drawbacks such as confusion in system, high degree of conflict, and long time

decision-making, et cetera. This also applies to the competition concept. While the competitiveness creates the better performance, in many occasions it as well establishes enmity and reduces the morality in competitors, in this case the staffs. Consequently, this is likely to affect the services offered to customers causing the catastrophic result to the organization. The important process that can reduce this risk is to conduct the detailed study before making any adaptation.

5.5.2Adding crucial functions

Property management and facility planning

Giving the current situation that FM practice is still operation base, the way to improve it is to enhance its role to the strategic level where FM work contributes more advantages and affects more in improving hospital potential. To extend its role in strategic level, considering from current configuration, certain function units should be added into the directorate and these are property management, in public hospital group, and facility planning in both groups. Both are considered greatly significant because they are responsible for managing the physical resource of the organization, one of the crucial resources in any business. The organization will receive tremendous benefits if the resource is well managed while it can be disastrous to the organization business if the management goes the other way round, particularly in the service business where the facility is one part of the service provided to the customer, known as servicescapes[1].

By taking this action, the most important benefit that the new included units provide is the essential information concerning the organization physical resource, which is used in making decision in any facility related strategies and action plans for the aim of both business success and service quality improvement. For example, the facility planning unit, whose work relates to space management, would conduct the research about space utilization and provide the current information of how the facility is being used whether it is over utilized and insufficient to respond the demand or not. Thus the hospital executive can rely on this information and making the less-error and less-risky decision that it is feasible to launch the new building project or not. The other example is that the unit provides the information concerning obsolescence issue allowing the facility manager and the hospital executive to initiate the solution project whether major refurbishment or new building construction to improve the value of the facility in both

[1] Fitzsimmons and Fitzsimmons, Service management

business and service quality to serve the patients. This is the urgent case in the public hospital group, in which some hospitals have a number of more-than-50-year-old buildings in the site.

As for the case that the property management unit has already existed in the parent organization, the suggestion is to create the better and closer relationship between the facility directorate in hospital and the existing unit in parent organization. This action establishes the connection that allows the directorate in hospital to access and acquire those relevant and significant data from the one in parent organization in less time. Moreover, it also reduces the alienation between both units creating more unity in working environment. As a result, the work process is improved –faster and more harmoniously- and then the work is done more effectively improving FM services quality.

Contract management

Giving the trend that the contract-out work is increasing, it should be appropriate to build this function unit and assign it the responsibility to handle all the contract issues instead of letting each work unit individually deals with this task. The advantage is that this unit, of which the staffs are the specialists in this area, can apply the expertise and effectively manage the contract-out to yield the better result while the host function unit provides the corporation such as giving the relevant essential information including expertise opinion for making decision, and making the feedback to the contract unit for further evaluation in the next bidding or negotiation.

5.5.3 Staff quantitative and qualitative

Quantitative

Considering one part of the result concerning the staff ratio and bed ratio, it apparently shows that the private hospital group utilizes more human resource in the facility directorate than the public group does particularly when the comparison bases on the generic facility directorate model, consisted of six work units, see Figure 4.14. Possibly this is the important factor that makes the public agree that private hospital has a better and more welcome facility and support service than the public hospital and willing to pay higher price for the private hospital services. Therefore, in order to increase the quality of service in public hospital, the increase in workforces in facility

management directorate can be one of the sensible solutions, though other aspects should be taken into consideration as well to find the most suitable way since certainly the public hospital context is not the same as the private such as the finance system, the average status of the customers, and the required quality level, et cetera.

Qualitative

As the trend suggest the downsizing of the facility directorate by making more outsourcing in the operation, the skill in co-ordination and management becomes more important for the facility staff, particularly those in the centre unit and the function unit chiefs. To improve this kind of skill to the existing staffs, the training session is the practical method. As for the new applicants, the job description needs to adapt and clearly identify this character correctly in order to recruit the suitable employee.

5.5.4 Developing the organizational process

According to the study result, the trend suggests that there is a sign of combining the control system between input and output focus. Though it is still rather imbalance, this is certainly the development considering the culture facet that the input base has been deeply rooted in any organizations for decades and rather unlikely to be eliminated. The further development can be done by developing the performance measure and gathering the data to establish the performance database. This database will certainly be useful for solving certain problems in the future. For example, when the performance of the directorate staff drops off the acceptable level, the information in the database combining with the directorate budget record possibly prove that the problem is caused by the too-low budget in that year.

The other intriguing aspect found in the current case study is the attempt to use the self regulation as the supportive process. If the shift to more output base is the development, this change is certainly the revolution. This process mainly relies on the mutual adjustment[2]. Each individual must know his responsibility and capable of effectively executing it with little, or without, supervision. In this process, the other important component is the individual personal motivation, which is hugely affected by the leadership style. As can be seen, the self regulation process requires the staffs with quality including the managers. Nonetheless, if this process can be successfully applied in the system, it promises to yield the effective performance from the facility staffs in the sustainable way and as a result this certainly improves the hospital service in an

[2] Johnson and Scholes, Exploring corporate strategy referred from Mintzberg, The structuring of organizations.

enormous degree. The key factor lies in the manager ability to drive this method to fully function. He or she has to make the staffs realize their roles and be able to make the decision, in their power limit, to finish the work. Most of all, the facility manager has to drive the staffs' motivation to maintain the quality of their performance. So far, the managers in three out of eight case studies in this paper now challenge this possibility expecting to boost his staff performance quality.

5.6 Conclusion

In this chapter, the result from case investigation is analyzed in four topics, as followed. Firstly, the hypothesis validation demonstrates that the result partly supports all three study hypotheses. Certain aspects are not the same as assumed such as the decentralized character and the less-dominance of the outsourcing. Secondly, the analysis shows that the future trend of facility directorate configuration is likely to be more or less the same as the present one. The only aspect in the configuration that certainly changes is the outsourcing as the information from the interview suggests. Thirdly, the configuration result is synthesized to explain the current facility management practice in healthcare sector that it still remains focusing on the operational level with only limited strategic role. The scope of work generally bases on the building services and the major strategy applied in the practice is still cost centre. Lastly, four possible improvements for FM that can be done by modifying the configuration are proposed. These four issues are: adapting the organization structure, adding certain crucial functions in facility directorate, staff quantitative and qualitative, and developing organizational process.

Chapter 6
Conclusion

6.1 Summary

This dissertation aims **to explore the current FM practice in Thailand healthcare organization** as the first step in enhancing the FM potential and, consequently, improving the hospital potential. To achieving this goal, the study selects to approach the topic by studying organization configuration of FM directorate since the configuration provides most of the fundamental information concerning FM practice. The key question in this study is: **What is the organization configuration of FM directorate in Thailand healthcare organization?**

In answering this question, the field study must be done. However, before that, the basic understanding is needed first and it can be acquired from the literature review. In this process, the topic related literatures had been reviewed and summarized in chapter 2. These literatures are, for instance, Mintzberg organization theory, Cotts FM organization concept, Barret ideal FM operation, and Chotipanich FM in Thailand including other FM and medical management books and magazine. Having the basic understanding, then the study hypotheses have been formulated:

1) ***The organization configuration of facility directorate in Thailand's healthcare organization has the typical character of the machine organization.***

2) ***The organization configuration of facility directorate in Thailand's healthcare organization is building service based.***

3) ***The outsourcing is dominant in the organization configuration of facility directorate in Thailand's healthcare organization.***

Then the analysis framework of this study is explained. There are two stages in this study analysis. The first stage is organizational analysis. In this analysis, the case study will be investigated regarding its FM directorate configuration. The model used in the investigation derives from the one Johnson and Scholes propose in their books, *Exploring corporate strategy*. It shows the organization configuration is composed of three parts: organization structure, organizational process, relationships. The second stage of the analysis is the result analysis where the results from the first stage are

summarized and further analyzed to validate the hypotheses, predict the trend of future FM configuration, illustrate the current FM practice, and provide the suggestions to make any improvements for FM.

In this dissertation, the case study and structured interview are selected for gathering the data. There are six criteria in case selection and these are:

1) The selected case has to be the general hospital.
2) The selected case must provide tertiary care.
3) The selected case must be located in Bangkok
4) The selected case has to be qualified in top 20 healthcare service providers.
5) The selected case must have the acceptable rate of patient flow.
6) The selected case must contain more than 400 beds.

Based on these criteria, a group of hospitals that can sensibly be representative organization is chosen and the structured interview is conducted.

The result is summarized and the hypotheses are validated. In validating the hypotheses, **the test result shows that the hypotheses are partly supported**. The facility directorate does have the typical character of machine organization but only some not all and it is based on the building service operation. However, the outsourcing is not as dominant as assumed. Further analysis explains the future trend of the facility directorate configuration that the configuration is likely to be unaltered except the increasing trend in outsourcing.

Based on this information, the synthesis illustrates that the FM current practice in healthcare sector still focuses on the operational level. Most of its works are building services. Chief functions among these are transportation and engineering services. Meanwhile, its role and task in strategic level is undeveloped. The only strategic FM function being practiced is the property management. As for the strategic work -the project-, FM involvement is limited. It concerns the project in two stages: construction and post occupied. In the first stage, FM has the main function either as the controller or as the construction worker, while in the second stage, FM is the operator. Further analysis brings two issues into question. The first is the existing and the role of FM in the parent organization of hospital. The second issue is the relationship including work system between FM in the hospital and FM in the parent organization. The answer to the first issue is still inconclusive, while in the second issue, the study finds that the

business model the parent organization uses in operating its business is the important variable affecting the relationships and work system between the two FM. The last facet of FM practice explained here is the strategy used in the directorate. It can be concluded that the strategy is the cost centre.

Finally, the study provides four possible improvements for FM by modifying FM directorate configuration. These are: adapting the organization structure, adding crucial functions, staff quantitative and qualitative, and developing the organizational process.

Further study

This study accomplishes its aim to provide the basic understanding concerning facility management in Thailand healthcare organization. By the end of the study, it uses this information and proposes the alternatives in improving FM potential in order to assist the hospital improving itself for handling the incidents that happens recently. This is the intention from the researcher to demonstrate the importance to learn the basic first and then use them to generate other practical study, research, or any suggestion. This issue is particularly crucial in Thailand since there are relatively few FM researches done in the country causing the serious trouble in lacking knowledge and understanding to the professional. As a result, the professional cannot develop properly and, in the worst way, the career will disappear and many recognize it as the fad not the career.

Now that the basic understanding has been provided, the further more-in-depth and more-detailed research can rely on this information and carry on. For example, the study for solving the problem of long queue waiting in public hospital, the research for finding the solution for the insufficient supply of hospital beds compared to the patient demand, the in-depth study of the advantage in establishing the facility planning and space management practice in the organization compared to outsourcing, et cetera. Ultimately, all these will practically assist the hospital to improve its potential and service quality provided for the patients.

Appendix A

Interview form A

Hospital: No. bed: Total Area: m^2 Overall staff no.:

Interviewee: Position:

Organization structure

- Please describe the FM department organization structure i.e. organization chart, number of staff in each group or team, and the operating system in the department.
- Please identify the advantages of this type of structure
- Please identify the challenges in the working system caused by this structure.

Process

- Please identify the type of organizational process being used in the FM department and briefly describe it.

Relationships

- Please describe the inside directorate relationships.
- Please identify the delegation in power inside the directorate.
- Please describe the relationship between the directorate and the hospital centre.
- Please identify any external relationships, if any.
- If there is the contracted out, please identify the services.
- Please identify the perceived benefits and drawbacks from the contracted-out arrangement.
- Please identify the occurred benefits and drawbacks or benefits from this contract-out decision.

Future

- Please identify if there are any suggestions in change to the organization configuration in the future.
- Please identify the reason for this change.

Interview form B (Alternative)

Hospital: No. bed: Total Area: m^2 Overall staff no.:

Interviewee: Position:

Organization structure

- Please describe the FM department organization structure i.e. organization chart, number of staff in each group or team, and the operating system in the department.
- Please identify the advantages of this type of structure e.g. manager in touch with all operation, reducing control mechanism, and clear definition of responsibility.
- Please identify the challenges in the working system caused by this structure.

Process

- Please identify the type of organizational process being used in the FM department such as direct supervision, planning and control system by administer of the department, performance targets, market mechanism, or self-control.
- Please identify the most dominant system.
- Please briefly describe how the system works.

(Additional alternative in case the interviewee does not understand the type of process.)

- Is there any annual directorate plan?
- Is there any monitoring system after the plan has been carried out?
- Please describe the process in formulating the plan.
- Is there any performance evaluation? If yes, how frequent is it taken?
- Does the directorate use the service agreement to control the operation?

Relationships

- Please describe the inside directorate relationships.
- Please identify the delegation in power inside the directorate.
- Please describe the relationship between the directorate and the hospital centre.
- Please identify any external relationships, if any.
- If there is the contracted out, please identify the services.
- Please identify the perceived benefits and drawbacks from the contracted-out arrangement.

- Please identify the occurred benefits and drawbacks or benefits from this contract-out decision.

Future

- Please identify if there are any suggestions in change to the organization configuration in the future.
- Please identify the reason for this change.

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